A STUDY TO ASSESS THE POST TRAUMATIC STRESS SYMPTOMS AND ANXIETY AMONG PATIENTS AFTER DISCHARGE FROM ICU AT KMCH, COIMBATORE

Reg. No. 301610451

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

OCTOBER 2018

CERTIFICATE

This is to certify that the dissertation entitled **"A STUDY TO ASSESS THE POST TRAUMATIC STRESS SYMPTOMS AND ANXIETY AMONG PATIENTS AFTER DISCHARGE FROM ICU AT KMCH, COIMBATORE"** is submitted to the faculty of nursing, **THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI** by **Register no. 301610451** in partial fulfilment of requirement for the degree of Master of Science in Nursing. It is the bonafide work done by her and the conclusions are her own. It is further certified that this dissertation or any part thereof has not formed the basis for award of any degree, diploma or similar titles.

KMCH COLLEGE OF NURSING * COIMBATORE-641014

Prof. DR. S. MADHAVI, M.Sc(N), Ph.D.,

Professor cum Principal,

KMCH College of Nursing,

Coimbatore-641014,

Tamil Nadu.

The Principal
K.M.C.H. College of Nursing,
P.B.No 3209, Avinashi Road,
Coimbatore - 641 014.

26/10/18

PROF. DR. B.V. KATHYAYANI, MSc(N) PhD

26/10/18

Prof. DR. S. MADHAVI M.Sc(N)., Ph.D.,
The Principal
K.M.C.H. College of Nursing
P.B. No : 3209, Avinashi Road,
Coimbatore - 641014.

A STUDY TO ASSESS THE POST TRAUMATIC STRESS SYMPTOMS AND ANXIETY AMONG PATIENTS AFTER DISCHARGE FROM ICU AT KMCH, COIMBATORE

APPROVED BY DISSERTATION COMMITTEE ON MARCH 2018

1. **RESEARCH GUIDE:** .....

Prof. DR. S. MADHAVI, M.Sc(N), Ph.D.,
Professor cum Principal,
KMCH College of Nursing,
Coimbatore-641014.

2. **CLINICAL GUIDE:** .....

Prof. P. KUZHANTHAIVEL, M.Sc (N),
Department of Medical Surgical Nursing,
KMCH College of Nursing,
Coimbatore-14.

3. **MEDICAL GUIDE:** .....

Dr. P. VIVEKANANDHAN
DA., EDIC., FRCA(UK)., FFICM.,
Consultant Intensivist,
Kovai Medical Center and Hospital,
Coimbatore-14.

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr. M. G. R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

OCTOBER 2018

ACKNOWLEDGEMENT

I am grateful to God Almighty for His grace, blessing, guidance and support which strengthened me in the research process and sustained me throughout this endeavour.

First and foremost, I offer my sincere gratitude to Our most beloved Chairman, **Dr.Nalla G. Palaniswami, M.D., AB (USA),** Chairman and Managing Director, Kovai Medical Center and Hospital and Our Trustee Madam **Dr.Thavamani D. Palaniswami M.D., AB(USA) FAAP.,** Managing Trustee, Kovai Medical Center Research and Educational Trust for giving me an opportunity to undertake my PG programme in this esteemed institution.

I grab this occasion to express my deep sense of gratitude and special thanks to**Prof. DR. S. Madhavi, M.Sc(N), Ph.D.,** Principal, KMCHCollege of Nursingwho was my research guide. She has supported me throughout my dissertation with her valuable knowledge in research and statistics.

I am extremely thankful to **Prof. RM. Sivagami, M.Sc(N).,** Vice Principal KMCH College of Nursing for her generous support, encouragement and timely advice to fulfil this work.

Words are inadequate in offering my thanks to **Prof. P. KuzhanthaivelM.Sc(N)**, Department of Medical Surgical Nursing, KMCH College of Nursing my clinical guide for his expert advice, extensive guidance and consultation, continued help, encouragement, right from the selection of the problem to the conclusion of this study.

I express my sincere gratitude to **Dr. P. VivekanandhanDA.,EDIC., FRCA(UK)., FFICM,** Consultant Intensivist, Kovai Medical Center and Hospital,my medical guide for his timely help, suggestions and guidance given throughout the study amidst his busy schedule.

My grateful thanks to my class coordinator **Prof S. RenukaM.Sc (N)**, Head of the Department in Obstetrics and Gynaecology Nursing, for her enthusiasm and interest that provided me with strength and encouragement to complete the study.

I am thankful to our Medical Surgical Nursing Coordinator **Prof.Dr. P. Viji, Ph.D, MSc.(N)** for her guidance and support that gave me courage and enthusiasm to complete my study and all other specialty faculties who have helped me throughout the completion of my study.

I would like to acknowledge the efforts of **Ethical Committee** members of Kovai Medical Center and Hospital for providing several recommendations and their enlightening ideas made me to feel ease during the course of the study.

I am exceedingly thankful to **Mrs. J. Vennila**. Associate Professor, M.Sc. Bio Statistician, KMCH College of Pharmacy, for her guidance in statistical analysis and interpretation of data during the study.

I express my sincere thanks to the Chief Librarian, **Mr.A.Damodharan** and Assistant Librarian, KMCH College of Nursing for the source of computer searches and articles which made it possible to update the content.

I am especially grateful to my study participants and their sincere cooperation shown in completion of my study without which my venture would not be a fruitful one.

My special thanks to my classmates, friends and ICU nurses who directly and indirectly encouraged me and helped me throughout my study.

Above all I am deeply indebted to my mother and husbandfor their valuable support and unconditional love, motivation, prayers and blessings and economic and moral support throughout my study without which my dream would never have come true.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

SL.NO.	ACRONYMS	ABBREVIATIONS
1.	PTSS-14	Post Traumatic Stress Symptom -14
2.	STAI YI	State Trait Anxiety Inventory Y1
3.	STAI Y2	State Trait Anxiety Inventor Y2
4.	APACHE II	Acute Physiology And Chronic Health Evaluation score II
5.	CAM-ICU	Confusion Assessment Method-Intensive Care Unit

CHAPTER- I

INTRODUCTION

More people worldwide becomes critically ill every year and require treatment in the Intensive Care Unit. Millions of patients survive critical illness due to the improvements in medical research and technological advances in the Intensive Care Units. The emotional consequences of being critically ill has increased because of this change in survival rate.

Critical illness can expose patients to traumatic stressors that are caused by both Intensive Care intervention techniques and life threatening experiences. For the last ten years, there has been an increasing interest and attention regarding psychological consequences related to surviving critical illness. This patient population were found to have both Post Traumatic Stress Symptoms and Post Traumatic Stress Disorders. (Davydow et al., 2013).

The DSM V criteria for diagnosis of PTSD are defined as (a) exposure to death, threatened death, actual or threatened serious injury, (b) re-experiencing the event by intrusive thoughts, nightmares, flashbacks or emotional distress, (c) avoidance of trauma related stimuli, (d) negative thoughts or feelings that began or worsened after trauma such as inability to recall key features of trauma or feeling isolated, exaggerated blame of self or others for causing the trauma (e) trauma related arousal and reactivity that began or worsened after trauma such as irritability, hyper-vigilance, difficulty concentrating, difficulty sleeping, (f) symptoms last for more than one month, (g) symptoms create functional impairment (h) symptoms are not due to medication, substance use or other illness. (American Psychiatric Association, 2013)

Post Traumatic Stress Symptoms are a cluster of symptoms that includes re-experiencing the events via nightmares or flashbacks, avoidance of people or places associated with the event, depressed mood, trouble concentrating, irritability and hyper vigilance. PTSD can be diagnosed if the symptoms persists for atleast one month and cause distress in the social and occupational aspects of the person. (Stein et al., 2013)

Demographics, a prior psychiatric history, ICU memories, sedation level and how patients are cared for in the ICU are all factors that can contribute to the development of PTSD. It includes younger age, female, experiences of traumatic injury, sedation dosage in the ICU, stressful events in the ICU and the memories of pain and breathing difficulties. (Bienvenu et al, 2013)

Painful procedures, mechanical ventilation and significant physical limitations are some of the factors that makes the critically ill patients get expose to stressors. In addition, prolonged physical weakness, disturbances in sleep patterns, impaired memory, attention and concentration deficit have also been reported among ICU survivors. Patients with Post Traumatic Stress Symptoms were found to have symptoms of PTSD, but they did not meet all the criteria for making the diagnosis of PTSD (Jackson et al. 2014)

Indeed, the illness of patients who meet all the criteria of the Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition) sooner than 30 days after the traumatic event cannot be diagnosed as PTSD. PTSS may get progress to PTSD if not treated in the early stages. Long term psychological consequences can be reduced if at risk patients are identified early after the ICU stay. Patients with more experience of traumatic memories (nightmares, hallucinations, panic, and respiratory distress) after an ICU stay reported a higher incidence and intensity of PTSD symptoms than did patients who did not report traumatic memories of an ICU stay (Morrissey, 2016).

Inability to communicate normally and autonomic dysfunction are all some factors that increase the risk of psychiatric morbidity like delirium, depression and posttraumatic stress disorder. PTSD could be a potentially serious psychiatric disorder that could have an added impact on recovery and result in reduced quality of life (Svenningsen et al., 2015).

Multiple factors are associated with the development of PTSD and agitation in the critically ill patients. Sedation strategy in the Intensive Care Unit is one of the factor that is related to the development of mental health disorders. Nightmares, anxiety and pain were the symptoms reported by the population who had experienced the stressful events. (Porhomayon et al., 2015).

Generalized anxiety disorder is being defined in the Diagnostic and Statistical Manual V (DSM V) as that which includes symptoms such as restlessness, sleep disorders, mood swings, irritability in nature, concentration difficulties or muscle tension that are produced in response to the stressful events experienced by the individual. It is how the humans perceive the situation and reaction to any kind of threatful stimuli. ICU interventions such as mechanical ventilation and sedation induced to the patient causes an imminent threat to the patient life and affects the quality of life (American Psychiatric Association, 2013).

Studies have shown that Post Traumatic Stress Disorder is related to both depression and anxiety. A traumatic event is the most important starting feature for the development of Post Traumatic Stress Disorder. Other features of PTSS includes intruding thoughts related to the traumatic event that causes an impact on the normal functioning of the individual and avoidance of people or places that may pave the way for the recall of the traumatic event. Another important characteristic features of anxiety includes excessive, irrational concern about non-threatening events or possible events that can be disruptive and those that interfere with the normal functioning of the individual. It is distinguished from fear which is a basic human emotion that is directed at a realistic event. (Marshall G.N. et al., 2010)

Once PTSD is diagnosed, even though it can be debilitating, the treatment aspects involves targeting and reducing symptoms. Pharmacotherapy and eye movement desensitization and reprocessing are some of the treatment for the management of PTSD. Psychodynamic, cognitive, and behavioural approaches can be provided to normalize the symptoms, helping the patients to develop coping strategies and build self-esteem, encouraging emotional display and providing support. (Griffiths et al., 2011)

Critically ill patients are facing a huge potentially traumatic experience which causes a significant portion of these patients to develop severe emotional disorders such as anxiety and post-traumatic stress disorder. These experiences are accompanied by psychological suffering with harmful impact on the patient's rehabilitation. Studies recommend drug intervention like hydrocortisone use for chronic stress and PTSD prophylaxis. Hydrocortisone inhibits the manifestation of intrusive memories, but has no interference on the formation of traumatic memories. (Fumis R, et al., 2014).

Among psychotherapeutic approaches, evidence based approaches include cognitive- behavioural therapies like Prolonged Exposure and Cognitive Processing Therapy and Eye Movement Desensitization and Reprocessing. Relapse can occur after the discontinuation of pharmacotherapy, whereas it remains stable after the completion of evidence based psychotherapy. (Lancaster et al., 2016)

Each of PTSS and anxiety are disorders that can occupy a spectrum of implications on those with these conditions and range from mildly inconvenient to debilitating. Their recognition continues to carry varying levels of stigma that may further reduce both their perceived prevalence and reported significance.

NEED FOR THE STUDY

The lifetime prevalence of PTSD is estimated to be 8% in the general population with the rates of 10-12 % in females and 5-6% in males. About 6% of the women experiencing childbirth, 8-45 % of the burn patients and 20-28% of the cardiac patients have symptoms consistent with PTSD and the prevalence of PTSD was reported from 17%- 30 % in ICUs. (Breslau, 2013).

Extremely stressful experiences, anxiety, adverse and factual memories were factors associated with risk of developing post-ICU Post Traumatic Stress Disorder / Post Traumatic Stress Symptoms. The literature has suggested that the absence of memory is protective against the development of PTSD rather than remembering the stressful and traumatic events. Explicit memories could be the basis for nightmares and flashbacks and thus it will contribute to the avoidance and re-experiencing of the events. (Alklit et al. 2017).

The patients are exposed to serious stressors by being admitted to ICU such as being in pain, having physical restraints, tubes in nose or mouth, sleep deprivation, and not able to communicate. Certain demographic factors such as younger age, female, educational level and prior psychiatric history has been regarded as the risk factors in the development of PTSD. (Sareen J., 2014).

A systematic review of 24 cohort studies of general ICU and Acute Respiratory Distress Syndrome survivors found that the point prevalence of questionnaire ascertained PTSD symptoms were 22% and the median point prevalence of clinician

diagnosed PTSD was 19%. The prevalence of substantial PTSD was 16% at 3 months post ICU and 15% at 12 months post ICU. (Asimakopoulou, 2014)

According to US National Comorbidity Survey Replication (NCS-R) 2001-2003, 3.6% of US adults had PTSD last year. It was higher for females (5.2%) than males (1.8%). The life time prevalence of PTSD was 6.8%. 2015 meta-analysis found prevalence of PTSD symptoms after ICU discharge of 24% at 1-6 months later and 22% at 7-12 months later. Risk factors were benzodiazipine use and early memories of frightening ICU experience. (Ericcson et al., 2014)

Studies from 1997 through 2007 with studies from 2008 through 2012 of post ICU PTSD in both the medical and surgical patients shows prevalence rates between the two groups of studies were similar: 8% to 27% (1997- 2007) and 9% to 27% (2008-2012). These numbers suggest ICU patients are at a higher risk for PTSD than the members of the general population (Wade et al, 2015)

Before discharge from the ICU or hospital, the at-risk patients should be identified early and the nurse can provide mental health consultation to prevent the development of posttraumatic stress symptoms. In a large observational study of trauma ICU patients who received an extensive psychological intervention (education, stress management, psychological support, and coping strategies) to address anxiety, depression, fear, hopelessness, the incidence of PTSD was 21 % in the intervention group and 57% in the control group. (Backman et al., 2010)

The psychological aspects of the patients also need to be concerned after getting discharged from the Intensive Care Unit. Careful screening and detection of PTSS are critical for prevention and early intervention services in patients at high risk for PTSD after an ICU stay. Thereby, it is important to assess the posttraumatic stress symptoms in patients after getting discharged from the ICUs.

STATEMENT OF THE PROBLEM:

A study to assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from Intensive Care Unit, KMCH, Coimbatore.

OBJECTIVES:

The objectives of the study were to:

- Assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from ICU.
- Correlate the relationship between PTSS and Anxiety.
- Associate the Post Traumatic Stress Symptoms and Anxiety with selected demographic and clinical variables.

OPERATIONAL DEFINITIONS:

Post-Traumatic Stress Symptoms: Group of symptoms that includes re-experiencing the event via nightmares or flashbacks, avoidance of people or places associated with the event, depressed mood, trouble concentration, irritability and hyper-vigilance which is measured by PTSS-14 inventory.

State anxiety: It refers to the unpleasant emotional arousal due to any threatening demand as measured by Speilberg State Trait Anxiety Inventory Y-1.

Trait anxiety: It refers to the general tendency to respond with anxiety to perceived threat in the environment as measured by Speilberg State Trait Anxiety Inventory Y-2.

Patient: It refers to the male or female patients between the age group of 18-70 years discharged from the MICU and SICU to Step-down wards.

ASSUMPTION:

Life saving interventions used in the ICU can increase patient's risk for Post Traumatic Stress Symptoms and Anxiety.

CONCEPTUAL FRAMEWORK

The conceptual framework for this study was derived from Callista Roy's Adaptation Model (1976). According to Roy's Adaptation Model the goal of nursing is to facilitate adaptation of the individual for various stimuli from the environment.

The input of stimulating factors through the use of regulator and cognate coping mechanism to produce behavioural response in four inter related adaptive modes that are physiological, self-concept, role function and interdependence are the unique focus of this model. The coping mechanism results in the development of an adaptive or ineffective response.

The types of stimuli are **focal stimuli** (those that immediately confront the individual in a particular situation), **residual stimuli** (individual belief or characteristics that influence the situation) and **contextual stimuli** (those that influence the situation).

Adaptation occurs when the total stimuli fall within the individual's adaptive capacity. The nurse should examine the contextual and residual stimuli associated with the focal stimulus to ascertain the zone of adaptation within which coping can take place.

The individual's **regulator** mechanism is involved primarily with the physiologic mode (basic human needs) whereas **cognator** mechanism is involved in all four modes (physiological, self-concept, role function and interdependence). The perception of physical and personal self are included in the self- concept mode. The need for social integrity is emphasized in the role function mode and interdependence is the balance between independence and dependence in one's relationship with others.

The coping mechanism is the regulator of subsystem that occurs through neural, chemical and endocrine process. The cognitive process occurs through the person response to stimulus.

In this study, patients who were on mechanical ventilation after ICU discharge is considered as a **focal stimuli** that is affected by **residual stimuli** such as personal characteristics and attitude of the patients towards the hospital stay and the **contextual stimuli** includes age, sex, marital status, sedation level, days sedated, number of vasopressors and days on vasopressors.

The response of the patients to the ICU stay and its impact on the psychological aspects are the basis for the mechanism of regulation of adaptation and it was measured by PTSS 14 and STAI and how the patient overcome this by the acceptance of reality and the readiness to seek help from the health care members are included in the cognator

aspects. The **physiological effectors** to this response includes sleep disturbances, pain and muscle tension. The **self-concept** includes hopelessness and irritability and the **role function** was affected by the feelings of the patients that the future plans will not come true. Thus the outcome is the development of post traumatic stress symptoms and anxiety that are manifested by the symptoms such as nightmares, depression, mood swings, numbness, unwanted thoughts of ICU and avoidance of people related to ICU. The outcome was measured and manifested as high level (>45) of PTSS and low level (<45) of PTSS. The state and trait anxiety was measured and manifested as mild (20-37), moderate (38-44) and severe anxiety (45-80).

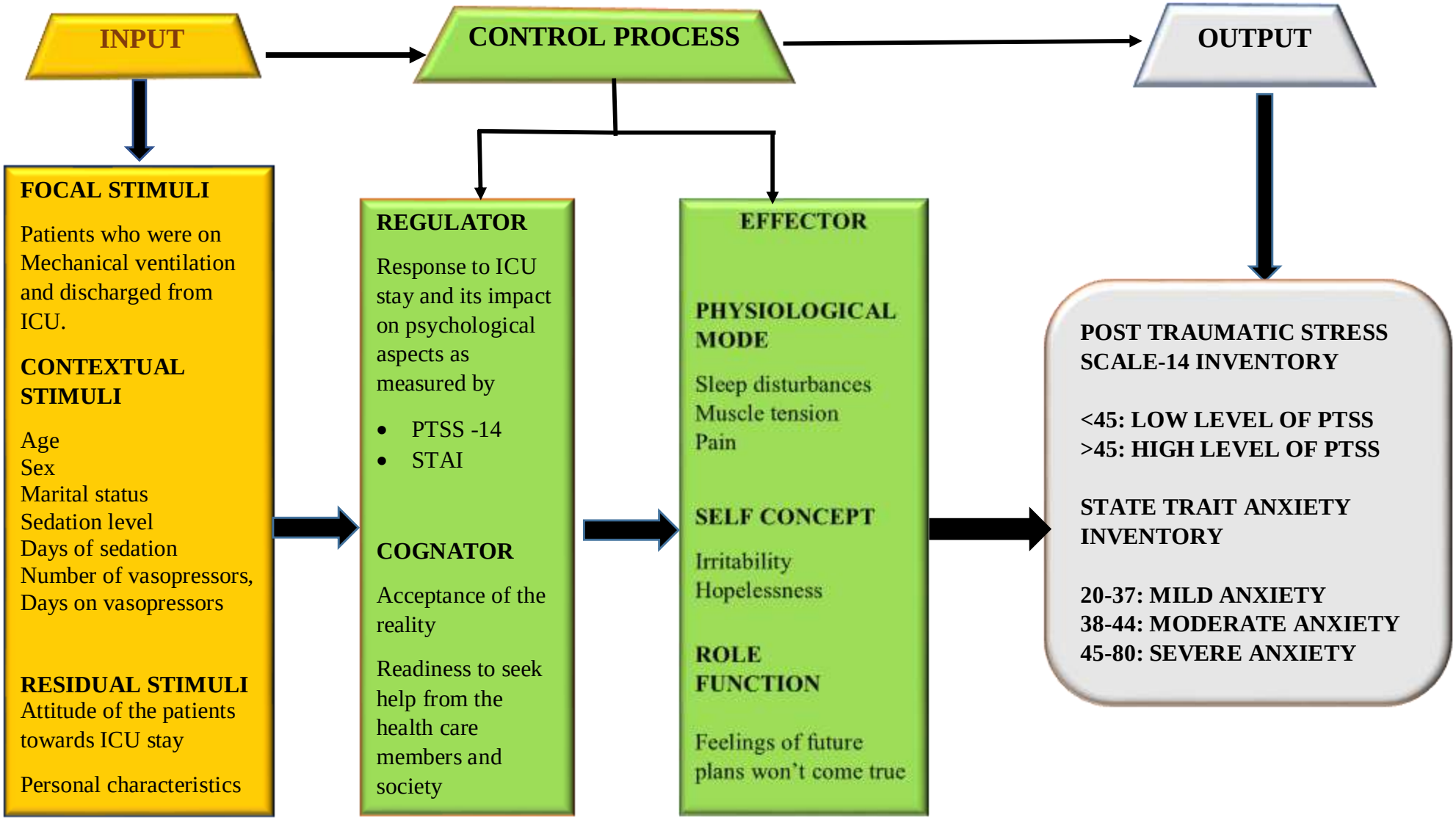


Fig 9: CONCEPTUAL FRAMEWORK: MODIFIED ROY'S ADAPTATION MODEL (1976)

CHAPTER -II

REVIEW OF LITERATURE

This chapter deals with information collected in relation to the present study through published and unpublished materials for foundation to carry out research work and related review of literature to research topic was done to collect maximum information for laying foundation for the study.

SECTION A: Literature related to Post Traumatic Stress Symptoms among patients discharged from ICUs.

SECTION B: Literature related to Anxiety among patients discharged from ICUs.

SECTION C: Literature related to correlation of Post Traumatic Stress Symptoms and Anxiety.

SECTION D: Literature related to Therapeutic Modalities for Post Traumatic Stress Symptoms.

SECTION A: Literature related to Post Traumatic Stress Symptoms among patients discharged from ICUs

Sadat et al., 2014 conducted a study to investigate the prevalence of PTSD and its related factors among patients discharged from Critical Care Units in Kashan, Iran. A descriptive prospective study was done on 332 patients who got admitted to critical care units of Kashan Shahid Beheshti Hospital using a convenience sampling method. Data were collected in wards and one month after their discharge data was collected from using questionnaires on demographic, clinical data and PCL. The PCL score of 45 or more was considered to have PTSD. Data were analyzed using chi-square, t-test, Mann-Whitney U tests and logistic regression. The mean score of PCL was 44.24 and the prevalence of PTSD were high among patients discharged from ICU and the factors associated with the prevalence were elderly, unemployed, being single, using mechanical ventilation and pre-existing diseases.

Rovatti et al., (2012) conducted a study in a private general at Porto Alegre to evaluate the presence of posttraumatic stress disorder six months after discharge from intensive care unit and assessed the relationship between PTSD and affective memories. 41 participants were taken for the study who were asked to complete the questionnaires

on PTSD (Screen for posttraumatic stress symptoms-17) and Memory Tool that was used to find out delusional, factual or affective memories. The results showed that 24.4% of the samples presented PTSD symptoms and there was correlation between PTSD and affected memories(R= .443, P<0.01). The days of hospitalization was significantly associated with delusional memories.

Kothyala S. et al., 2011 conducted a prospective study to find out the incidence of PTSD in mechanically ventilated patients and ascertain factors that is associated with the development of PTSD. Patients were interviewed after extubation to assess for PTSD at 1 week (n=140) and 2 months (n=92) and UK-PTSS-14 was administered to assess PTSS. The incidence of PTSD at 1 week was 32.8% and at 2 months was 23.9%. "Poisoning" (p=0.00) (p=0.00) and "past history of psychiatric illness"(p=0.00) (p=0.00) are the risk factors for development for PTSD at 1 week and 2 months respectively. On comparing PTSS-14 scores at baseline and 2 months, it showed significant increase (0.009) in scores in those who developed PTSD and significant decrease (0.000) in scores in patients with no PTSD. Development of PTSD was associated with nightmares and severe anxiety. The finding of this study shows that there is a high incidence of psychiatric symptoms in patients after discharge from ICU.

Jubran et al., (2010) conducted a prospective study at RML speciality hospital, Hindsdale on posttraumatic stress disorder in patients who got weaned from mechanical ventilation. PTSS 10 questionnaire was used to assess PTSD in 72 patients after a period of one week and in 41 patients again 3 months later. Structured clinical interview was used in the diagnosis of PTSD and was confirmed by an experienced psychologist. The results showed that PTSD was diagnosed in 12 % of patients who were weaned from prolonged ventilation. The median PTSS-10 score was 20 one week after weaning, and it was 19 after 3 months. The median PTSS Score was 45 at 3 month evaluation among patients diagnosed with PTSD and those with not diagnosed it was 15. APACHE II and duration of mechanical ventilation was not associated with the development of PTSD whereas it was associated with previous history of psychiatric illness.

Andreoli et al., 2010 conducted a review of studies by searching electronic data base (Medline) for the last 12 years (1996-2008) and took thirty eight articles to identify posttraumatic stress disorder in Intensive Care Unit patients. The main objective was to review the psychological aspects and therapeutic interventions in patients after the

Intensive Care Unit stay. The prevalence of post-traumatic stress disorder was from 17% to 30% and the incidence ranges from 14% to 24%. Anxiety, depression or panic, having delusional traumatic memories, duration of mechanical ventilation, stressful experiences and depressive behaviors were the risk factors. Delirium and delusional memory was seen in patients with high intake of opiates doses and lorazepam and also seen with sedation or analgesia withdrawal symptoms. Hydrocortisone administration and daily sedation interruption can be done to reduce the symptoms of PTSD.

Wallen et al., (2008)) conducted a prospective cohort study to identify the frequency of acute symptoms of posttraumatic stress disorder and to evaluate the factors that predicts occurrence of these symptoms in patients 1 month after discharge from Intensive Care in Gold Coast Hospital, Queensland, Australia. Participants completed the Impact of Event Scale Revised, and demographic and clinical data were assessed from an Intensive Care Unit database. 114 patients who met the inclusion criteria consented to participate in the study during 9-month period, and 100 (88%) completed the study. 13 participants (13%) scored higher than the cut off score for clinical Post Traumatic Stress Disorder. Sex and length of stay was not associated with the development of acute symptoms of Post Traumatic Stress Disorder. Patients younger than 65 years were 5.6 times (95% confidence interval, 1.1726.89) more likely than those 65 years and older to exhibit the symptoms. The rate of posttraumatic stress disorder 1 month after discharge from intensive care was relatively low.

SECTION B: Literature Related to Anxiety among ICU Patients

Castillo et al., (2016) conducted a prospective observational cohort study to identify the factors associated with anxiety in critically Ill patients in tertiary metropolitan public hospital Brisbane, Australia. Adults (n = 141, ≥18 years) admitted to the Intensive Care Unit for ≥24 hours, able to communicate verbally or non-verbally, understand English and open their eyes spontaneously or in response to voice were included in the study. State anxiety was measured by the Faces Anxiety Scale and trait anxiety measured by the State-Trait Anxiety Inventory. Among, 141 participants, 98 (70%) were male with an average age of 54 years and stayed in intensive care for about 4 (Interquartile Range: 3–7) days. The majority (82%) of participants experienced state anxiety at least once during their intensive care unit stay, with 57% had moderate to severe levels. Factors related to state anxiety in Intensive Care were pain and trait

anxiety. Thirteen factors were significantly associated ($p \leq 0.20$) with trait anxiety on univariate analysis: age, evidence of mental health care/treatment, trait optimism, state anxiety, smoking, length of hospital stay, length of propofol infusion, total dose of propofol, and total dose of midazolam.

Zakerimoghadam et al., (2016) conducted a study to find out the prevalence of anxiety while transferring patients from cardiac surgery intensive care unit to the general ward at TUMS hospital in Tehran city, Iran. This study was a cross-sectional study. 110 patients discharged from the intensive care unit to the general ward were the samples of this study. State-Trait anxiety inventory (STAI) Form Y-1 (State Anxiety) was used for data collection. The age of the study participants was over 60 years and 27.3% of them were in the range of 40-59 years. 59.1 percent of participants were male. Univariate regression analysis showed that gender had a significant relationship with anxiety. 30 % of patients had low anxiety before being transferred from intensive care unit to the general ward. Furthermore, 63.6 %of patients had moderate anxiety, and high anxiety was found in 4.6 % of patients.

Chlan (2011) conducted a study to assess anxiety in critically Ill patients who had mechanical ventilatory support and to describe the anxiety ratings for a group of mechanically ventilated patients. 57 mechanically ventilated patients who were randomly assigned were included as the participants that met the inclusion criteria and assessed the effectiveness of music interventions on anxiety among the mechanically ventilated patients in ICUs. Anxiety ratings were done daily for 30 days. A 100-mm Visual Analog Scale-Anxiety (VAS-A) was used to assess anxiety. Participants showed moderate anxiety at median VAS-A = 57.5. Relationship between VAS-A score and the number of days receiving ventilatory support ($\rho = -.04$, $p = .79$) was not manifested in the results. A linear growth model was then taken to depict the influence of sedative and analgesic medications on anxiety (sedative dose frequency and sedation intensity score). The growth model showed that VAS-A decreased slowly over time, $-.53$ points per day ($p = .09$).

Myhren et al., (2009) conducted a study to compare the psychological distress and memories from ICU treatment 4-6 weeks after discharge from ICU with the expectation of their realities. A sample of 255 patients and 298 relatives were included in the study and cross sectional design was used. Hospital anxiety and depression scale,

impact of event scale, life orientation test, ICU memory tool were the tools used to obtain the needed data. Relatives were also assessed for their expectations of the patients memories and psychological impact. In this, 25% of the patients reported severe posttraumatic stress symptoms, IES score $\geq$ 35. The anxiety levels and depression were significantly very high when compared to the general population. Mean anxiety was 5.6 and mean depression was 4.8. Relatives expected more level of psychological distress. Higher age, unemployment, pessimism, memories of pain were some factors that was associated with the development of PTSS.

Rattray et al., (2008) conducted a prospective longitudinal study on the emotional predictors of Intensive Care. Negative emotional outcomes (anxiety, depression and post-traumatic stress) have been identified in patients discharged from Intensive Care. The aims of this study were to assess levels and changes in emotional outcome after intensive care, and to find out how it is related to indicators of the intensive care experience. Hospital Anxiety and Depression and Impact of Event Scales were used to assess the emotional outcomes. Anxiety ($p = 0.046$) and depression ($p = 0.001$) got reduced subsequently, but it was not seen with avoidance ($p = 0.340$) or intrusion ($p = 0.419$). Most of the objective (age, gender, length of ICU and hospital stay) and subjective indicators (assessed by the Intensive Care Experience Questionnaire) of the intensive care experience were related to negative emotional outcome.

SECTION C: Literature related to relationship between Post Traumatic Stress Symptoms and Anxiety

Battle et al., (2017) conducted a mixed method study to investigate the predictors of Post Traumatic Stress Disorders following critical illness in Morriston Hospital, Swansea, UK. Patients attending the Intensive Care Unit (ICU) follow-up clinic were asked to complete the UK-Post-Traumatic Stress Syndrome 14-Questions Inventory and other data was collected from their medical records. Age, gender, Apache II score, ICU length of stay, pre-illness psychopathology, delirium and benzodiazepine administration during ICU stay were the factors that led to the development of PTSD and also delusional memories on the ICU stay after the discharge. 198 patients were participated in the study with 54 (27%) patients had post-traumatic stress disorder. The significant factors of post-traumatic stress disorder were younger age, lower Apache II

score, pre-illness psychopathology and delirium during the ICU stay on multivariable logistic regression.

Jacka et al., 2016 conducted a study to find out the incidence and prevalence of anxiety, depression, and Post-Traumatic Stress Disorder among critical care Patients, families, and practitioners at University of Alberta hospital, USA. An anonymous survey was conducted with consenting patients admitted with critical illness, their associated next-of-kin (NOK) of their families, and members of the clinical staff involved (medical, nursing, and allied health). Survey was conducted with patients and NOK at 28 days after ICU discharge, and to staff at patient admission.30 patients, next-of-kin, and associated medical/nursing/allied health staff gave consent for the study. Participants included 60%, 50%, and 58% among the eligible patients, NOK, and staff respectively. Among patients, NOK, and staff respectively, features consistent with the diagnoses of PTSD (50%, 33%, 19%), anxiety (61%, 33%, 41%), and depression (39%, 20%, 16%) were observed, which was substantially higher than that was expected based on estimate of prevalence of population.

Castillo et al., 2015 conducted a prospective study to determine the association between anxiety during critical illness and posttraumatic stress symptoms over 6 months after ICU discharge. 141 patients who were mechanically ventilated > 24 hours were included in the study as the participants. State anxiety was assessed with faces anxiety scale and trait anxiety were measured with State Trait Anxiety Inventory II. Posttraumatic stress symptoms were assessed using the posttraumatic stress symptom scale 10 questionnaire inventory. Social and demographic data were collected. Mixed effect regression models were used to determine if state and trait anxiety were factors significantly associated with posttraumatic stress symptoms overtime. The study findings depicted that there was a significant association of posttraumatic stress symptoms with higher levels of trait anxiety, younger age, mental health treatment prior to ICU admission and more symptoms of anxiety after ICU discharge.

Myhren et al., 2010 conducted a study to identify the predictors of posttraumatic stress, anxiety and depression symptoms in medical, surgical and trauma patients one year after the intensive care unit (ICU) discharge. Out of 255 patients 194 completed the study. Patients were asked to complete the Impact of Event Scale (IES), Hospital Anxiety and Depression Scale (HADS), Life Orientation Test (LOT) during a

time period of 4 to 6 weeks and 3 and 12 months and then the ICU memory tool. Case level for IES posttraumatic stress was ≥ 35 and that of HADS-Anxiety or Depression was ≥ 11. Memory of pain during ICU stay was measured on a five-point Likert-scale (0-low to 4-high). Patient demographics and clinical variables were controlled for in logistic regression analyses. In a subgroup, 27/170 (16%), patients IES score increased from 11 to 32, P < 0.001. There was no differences in posttraumatic stress, anxiety or depression between medical, surgical and trauma patients.

SECTION D: **Literature related to Therapeutic Modalities of Post-Traumatic Stress symptoms.**

Brady et al., (2015) conducted a study to identify the response of trauma focussed cognitive therapy on posttraumatic stress disorder. The study was conducted at a National Health Service clinic in South London, UK. It used video or audio recordings of therapy sessions who had received trauma focussed cognitive therapy. Outcome measures were taken during initial assessment and the last session. Posttraumatic stress diagnostic scale was used to measure PTSD. The competency of treatment delivery was assessed using Cognitive Therapy Scale- Revised. The results showed poor outcome in patients who had higher PDS and those who were taking psychotropic medication. Poor response was shown in patients with more in session preservation and less expression of thoughts and feelings. The results showed that the patient preservation was not correlated with patient expression of thoughts and feelings(r= -.19, p=.16). Thereby, it is concluded that patient preservation and low expression of thoughts and feelings were associated with poorer response to trauma focussed cognitive therapy.

Curtis et al., (2014) conducted a study on the creation of a conceptual model addressing identification, prevention, and management on posttraumatic stress disorder among survivors of critical illness. This article provides the importance of uniformity in future epidemiologic studies and propose the framing of risk factors that can be modifiable or non-modifiable, and also provides an assessment of modifiable risk factors and the development of conceptual model that offers insight into potential strategies to attenuate symptoms of posttraumatic stress among survivors of critical illness. Both younger age and female sex were the potential risk factors for symptoms of posttraumatic stress. Extreme agitation, use of benzodiazepines and ICU delirium

were the modifiable risk factors. Minimization of sedation could reduce the occurrence of ICU delirium and potentially influence symptoms of posttraumatic stress.

De bont et al., (2013) conducted a study to examine the efficacy and safety of two psychological approaches to posttraumatic stress disorder (PTSD) in 10 patients with a concurrent psychotic disorder. Patients were randomly allocated either to prolonged exposure or eye movement desensitization and reprocessing. A total of 20 weekly assessments of PTSD symptoms, hallucinations, and delusions were carried out before, during, and after treatment. The intervention given to the 10 patients showed that the PTSD treatment protocols of PE and EMDR significantly reduced PTSD symptom severity. Both PE and EMDR were found to have effective and safe. Eight of the 10 patients completed the interventions and was found equally effective. Seven of the 10 patients (70%) did not met the diagnostic criteria for PTSD at follow up.

Aitken et al., 2013 conducted a literature review to identify the effectiveness of diaries in psychological recovery from intensive care. 11 studies has been taken to identify the effectiveness of diary in aiding psychological recovery. The use of diaries across many countries and the methodology of various studies showed a degree of overlap. The impact of diaries were commonly assessed using interviews and standard questionnaires. 60-70% of patients don't have a psychological disorder 12 months post ICU. At risk individuals were the ones who benefitted the diary based intervention.

Peris et al., 2011 conducted an observational study to identify whether early intra-intensive care unit psychological intervention promotes recovery from posttraumatic stress disorders and also to evaluate the anxiety and depression symptoms in critically ill patients. Two groups were taken as critically ill patients who were admitted before intervention by the clinical psychologist (control group) and patients who were involved in the intervention given by the clinical psychologist (intervention group). The Hospital Anxiety and Depression Scale (HADS) and Impact of Event Scale-Revised questionnaires were the tools that was used to assess the level of posttraumatic stress, anxiety and depression symptoms. On the evaluation of HADS scores it was found that the patients in the intervention group showed lower rates of anxiety (8.9% vs. 17.4%) and depression (6.5% vs. 12.8%) than the control group, but the differences were not statistically significant. The risk for the development of PTSD was significantly lower in patients who received the intervention by the clinical

psychologist support than in the control group (21.1% vs. 57%; $P < 0.0001$). The percentage of patient population who needed treatment at 12 months was significantly higher in the control group than in the patient group (41.7% vs. 8.1%; $P < 0.0001$). Thus, the results showed that early intra-ICU clinical psychologist intervention can help critically ill trauma patients to recover from the stressful events.

CHAPTER -III

METHODOLOGY

This chapter deals with research methods widely used by the researcher to assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from the Intensive Care Unit.

RESEARCH DESIGN:

The research design for the study is Descriptive Correlational design.

It is used to correlate PTSS and Anxiety among patients discharged from the ICU.

VARIABLES UNDER THE STUDY:

The attributed variables focussed in the study are Post Traumatic Stress Symptoms and Anxiety.

SETTING OF THE STUDY:

The study was conducted at Kovai Medical Center and Hospital, Coimbatore. It is a tertiary hospital with all modern technology. MICU- I and SICU-I patients were taken for the study and the data collection was done at the step-down wards. MICU (medical intensive care unit- I) has 14 beds, SICU (surgical intensive care unit- I) has 14 beds.

ICUs have got much specialized infrastructure that enables to give high quality patient care. Equipments includes Multipara meter monitor, Invasive and Non Invasive Ventilators, Intra-Aortic Balloon Pump(IABP), Syringe pumps, Sequential Compression Devices(SCD), Patient warming system, Fluid warmers and motorized cot, Portable X ray, Ultrasound and ECHO machines, Cardiac output monitoring, ICP monitoring, continuous renal replacement therapy(CRRT) and Extra Corporeal Membrane Oxygenation(ECMO), ABG Analyzer, etc. The step-down wards have all the facilities that are needed by the critically ill patients that delivers quality care to the patients.

POPULATION:

The population of the study includes the patients in the age group of 18-70 years who got weaned from mechanically ventilator and discharged from MICU- I and SICU-I to step-down wards at KMCH, Coimbatore.

SAMPLE SIZE:

The sample size of the study was 60.

SAMPLING TECHNIQUE:

Samples were selected by using the Non-probability Purposive Sampling technique.

SAMPLING CRITERIA:

Inclusion Criteria:

- Male or female in the age group of 18-70 years
- Patients who stayed in the ICU for 24 hours or longer
- Weaned from Mechanically ventilator and Ionotropes
- Discharged from ICU to step-down wards
- No previous history of PTSD
- Able to understand either Tamil or English

Exclusion Criteria:

Patients with

- Altered mental status or disorientation
- Previous history of psychiatric illness
- Taking Anti-depressants and Benzodiazepines
- History of Traumatic Brain Injury

DESCRIPTION OF THE TOOL:

The tool consists of 3 sections:

SECTION A: DEMOGRAPHIC VARIABLES

It included age, sex, marital status, educational status, occupation and social habits.

SECTION B: CLINICAL VARIABLES

It includes APACHE -II score, days in ICU, sedation level, days of sedation, number of vasopressors, days on vasopressors, days in restraints and delirium. CAM-ICU was administered in a 24 hour period to measure delirium. Sedation was assessed using Richmond Agitation Sedation Scale.

APACHE-II: (Acute Physiology And Chronic Health Evaluation-II) is a severity of disease classification system developed by Knaus et al (1984). It is administered within 24 hours of admission of the patient to the ICU. The score is calculated from patient's age and using the 12 routine physiological parameters such as FiO2, Temperature, MAP, pH (arterial), heart rate, respiratory rate, serum sodium, serum potassium, creatinine, haematocrit, WBC count and GCS Score. It is used to predict the mortality of the patients.

APACHE- II Score	Predicted Mortality
10-14	15%
15-19	25%
20-24	40%
25-29	55%
30-34	75%
>34	85%

Richmond Agitation Sedation Scale (RASS): It is used to measure the agitation or sedation level of the patient. In this study it is used to measure the level of sedation.

Score	Description
+4	Combative
+3	Very agitated
+2	Agitated
+1	Restless
0	Alert and calm
-1	Drowsy
-2	Light sedation
-3	Moderate sedation
-4	Deep sedation
-5	Unarousable

CAM-ICU: CAM-ICU is used to identify patients suffering from delirium. It includes four features:

- Acute onset or fluctuating course
- Inattention
- Altered level of consciousness
- Disorganized thinking

Features 1 and 2 and either 3 or 4 if present is considered as CAM ICU positive.

SECTION C:

Post-Traumatic Stress Symptoms 14 (PTSS-14) Question Inventory:

The instrument is a 14 item, self- report scale based on the Diagnostic and Statistical Manual of Mental Disorders modified by Twigg et al.,(2008) based on PTSS-10. It consists of 14 questions about the PTSD symptoms scored on a 1 to 7 scale (1=never, 7=always). Total scores range from 14-98; higher scores indicate a greater level of PTSS; scores of 45 or greater are associated with high level of PTSS and scores less than 45 is associated with low PTSS.

THE STATE TRAIT ANXIETY INVENTORY

The instrument given by Charles D. Speilberger has 20 items for assessing state anxiety and 20 for trait anxiety. The responses for state anxiety assess the intensity of current feelings: 1) not at all, 2) somewhat, 3) moderately so and 4) very much so. Responses for trait anxiety assess frequency of feelings in general: 1) almost never, 2) sometimes, 3) often and 4) almost always. Thus, items are rated on a 4 point scale. Scores range from 20-80.

20-37: Mild Anxiety

38-44: Moderate Anxiety

45-80: Severe Anxiety

VALIDITY AND RELIABILITY OF THE TOOL:

The PTSS and STAI tool of the study are the standardized tools and has the established validity and reliability based on previous studies as follows:

The test retest reliability of the UK PTSS 14 is r = 0.86.

The internal consistency coefficient for the STAI range from .86 to .95

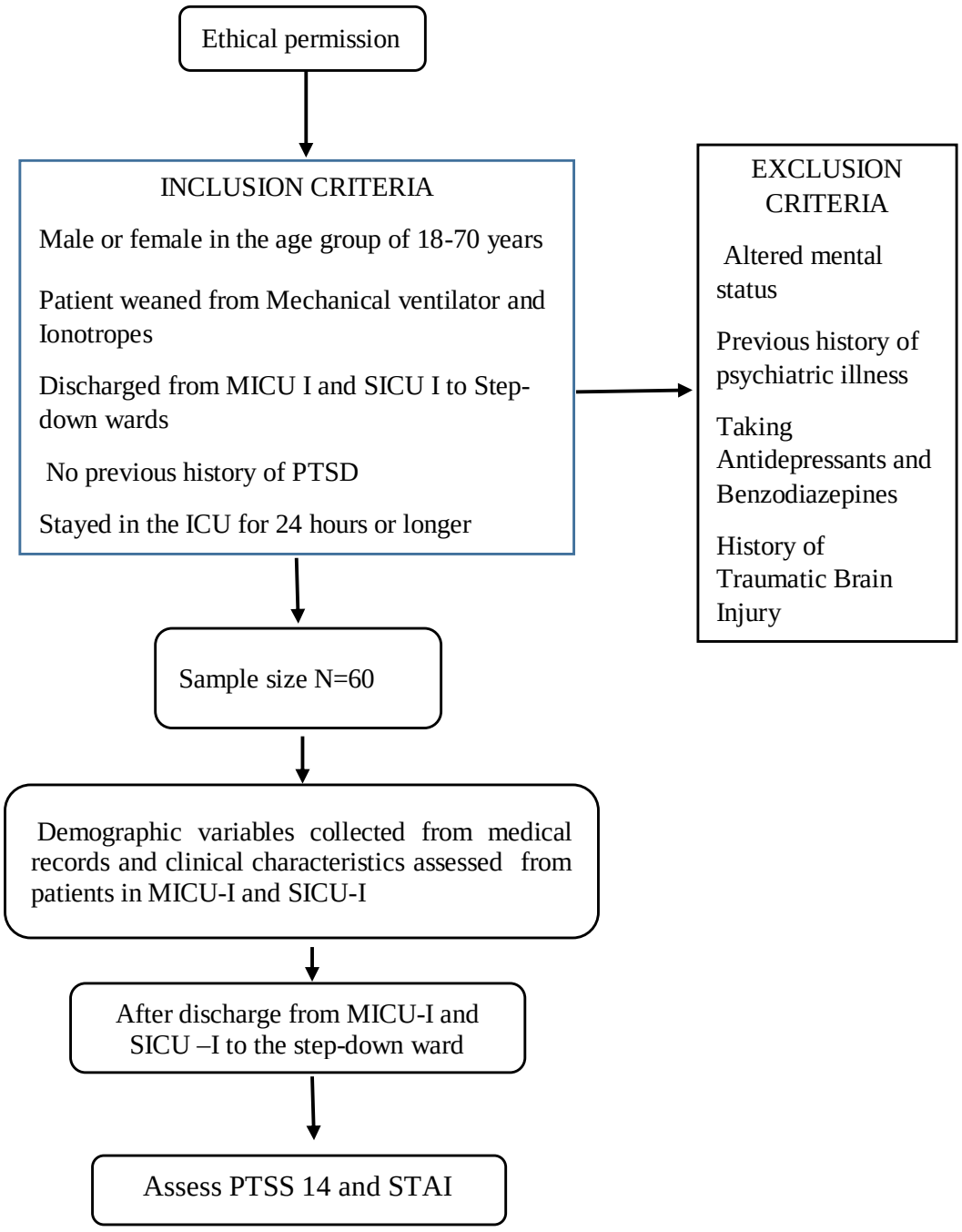
The Tamil version of both PTSS 14 and STAI have been used for the study. The reliability of PTSS 14 and STAI inventory were 0.82 and 0.88 respectively. The content validity of the Tamil translated tools were obtained from the Tamil expert.

PILOT STUDY:

The pilot study was conducted for a period of 1 week. The sample size was 10 patients who were weaned from mechanical ventilator and transferred from the MICU I and SICU I to Step down wards at KMCH, Coimbatore. Demographic and clinical characteristics were taken from the medical records and PTSS 14 and STAI inventory was asked to complete. The pilot study revealed that the study was feasible.

DATA COLLECTION PROCEDURE:

The data collection was done for a period of 6 weeks. A formal permission was obtained from the Ethical Committee, KMCH to conduct the study. The demographic data were collected from the medical records and clinical characteristics of the patient were assessed from the patients during MICU-I and SICU-I stay. PTSS 14 inventory and STAI Y-1 and Y-2 were asked to complete when the patients were discharged to the step-down wards. 15- 20 minutes were taken by the participants to complete the questionnaires.



STATISTICAL ANALYSIS:

The obtained data were analysed using descriptive statistics to describe the demographic variables and clinical characteristics. Karl Pearson Rank Correlation test were used to identify the correlation between PTSS and Anxiety. Chi- square tests was used to identify the association of PTSS and Anxiety with selected demographic variables and clinical characteristics.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of data collected from the subjects to assess the Post Traumatic Stress Symptoms and Anxiety after discharge from the Intensive Care Unit. The findings are as follows:

SECTION A: Description of Demographic variables

SECTION B: Description of Clinical characteristics

SECTION C: Assessment of PTSS and Anxiety among patients after discharge from ICU

SECTION D: Correlation of PTSS and Anxiety of patients discharged from ICU

SECTION E: Association of PTSS and Anxiety with selected Demographic and Clinical characteristics

SECTION – A

DESCRIPTION OF DEMOGRAPHIC VARIABLES

Table 1: Description of Demographic Variables of Respondents

(N=60)

S.No.	Demographic variables	Frequency(f)	Percentage (%)
1.	Age in years		
	17-35 years	5	8.33
	36-50 years	19	32.67
	51-70 years	36	60
2.	Sex		
	Male	41	67.33
	Female	19	31.67
3.	Education		
	Illiterate	6	10
	Primary education	17	28.33
	High school	21	36.67
	Graduate	10	27
4.	Occupation		
	Unemployed	19	31.67
	Self employed	24	40
	Professional	15	25
	Retired	2	3.33
5.	Marital status		
	Single	2	3.33
	Married	56	93.67
	Widowed	2	3.00
6.	Social habits		
	Smoker	10	16.67
	Alcoholic	9	15.00
	Both smoker and alcoholic	16	26.66
	Nil	25	41.67

Table 1 describes the distribution of demographic variables of the subjects.

Out of 60 subjects, 60% of the selected subjects comes under the age group of 51-70 years. 67% were males among the selected samples. Based on education, 28% had primary education and 37% had high school education. 40% were self-employed and 94% were married. 27% were both smoker and alcoholic and 42% didn't had either smoking or alcohol.

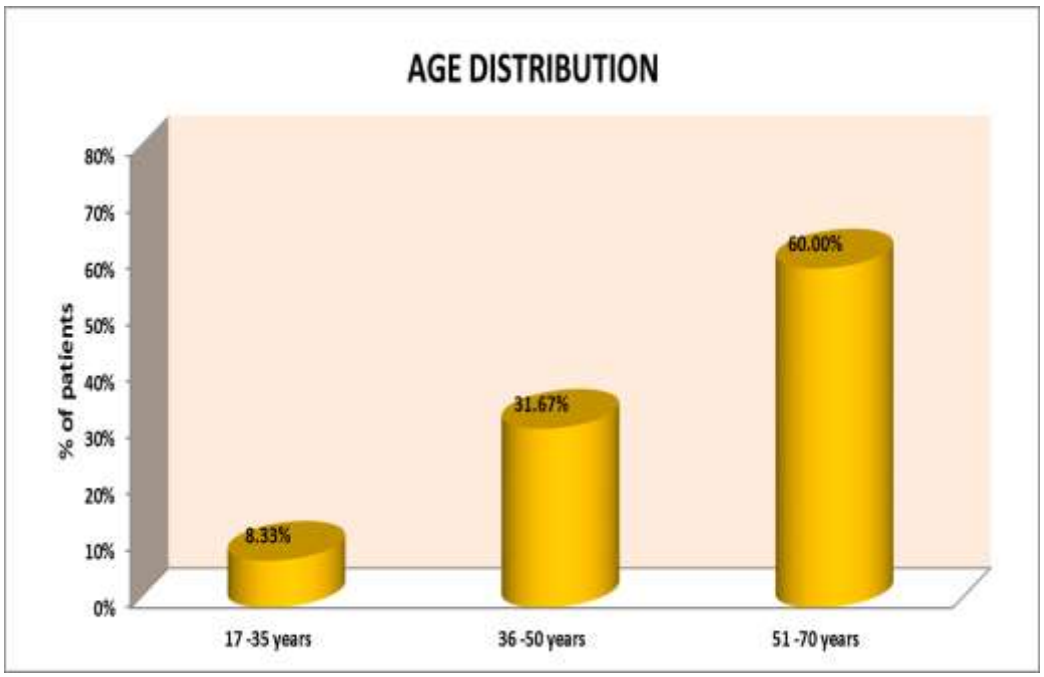


Figure 2: Distribution of Respondents based on Age

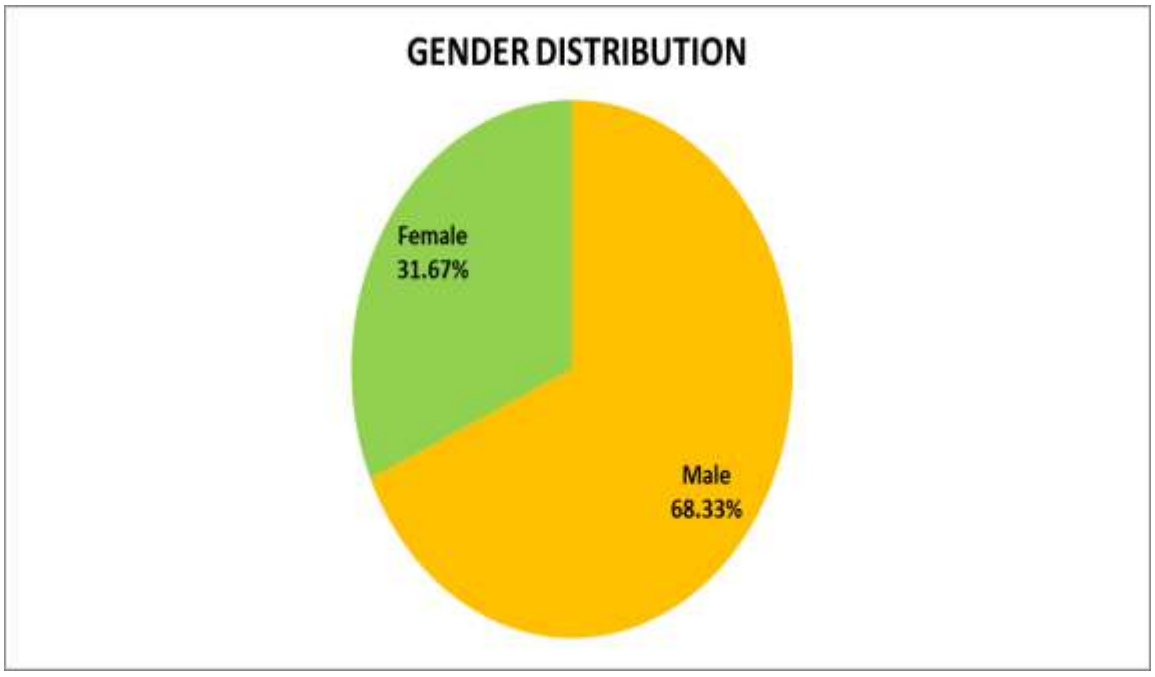


Figure 3: Distribution of Respondents based on Sex

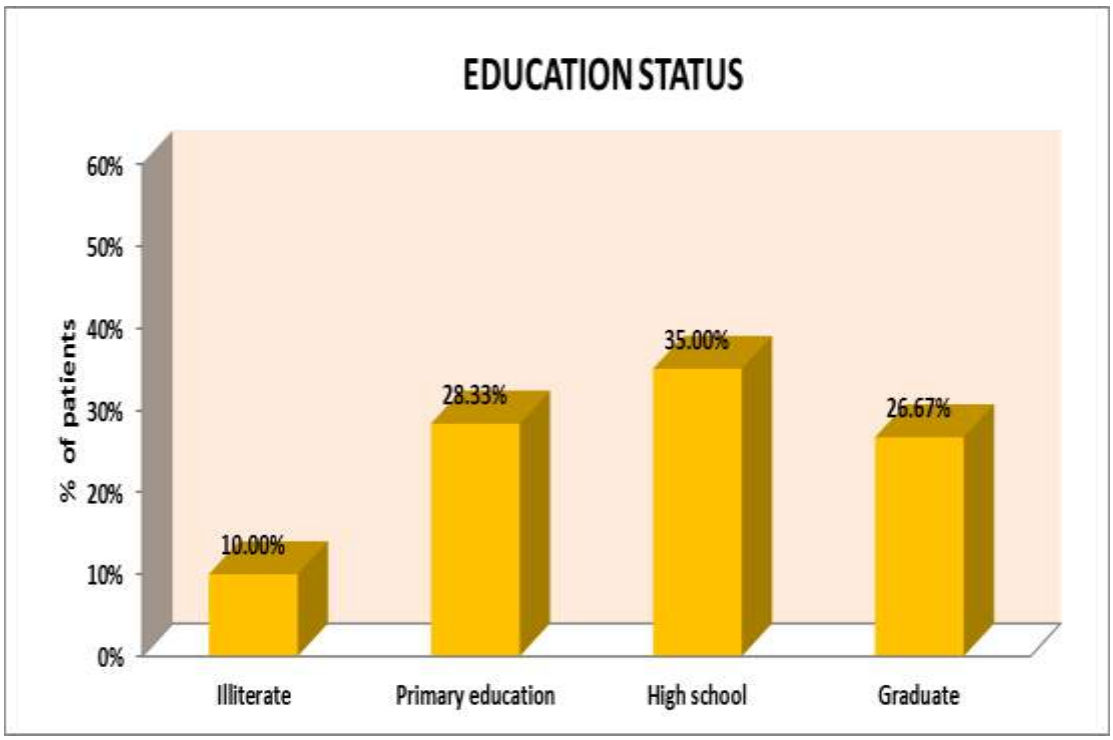


Figure 4: Distribution of Respondents based on Education

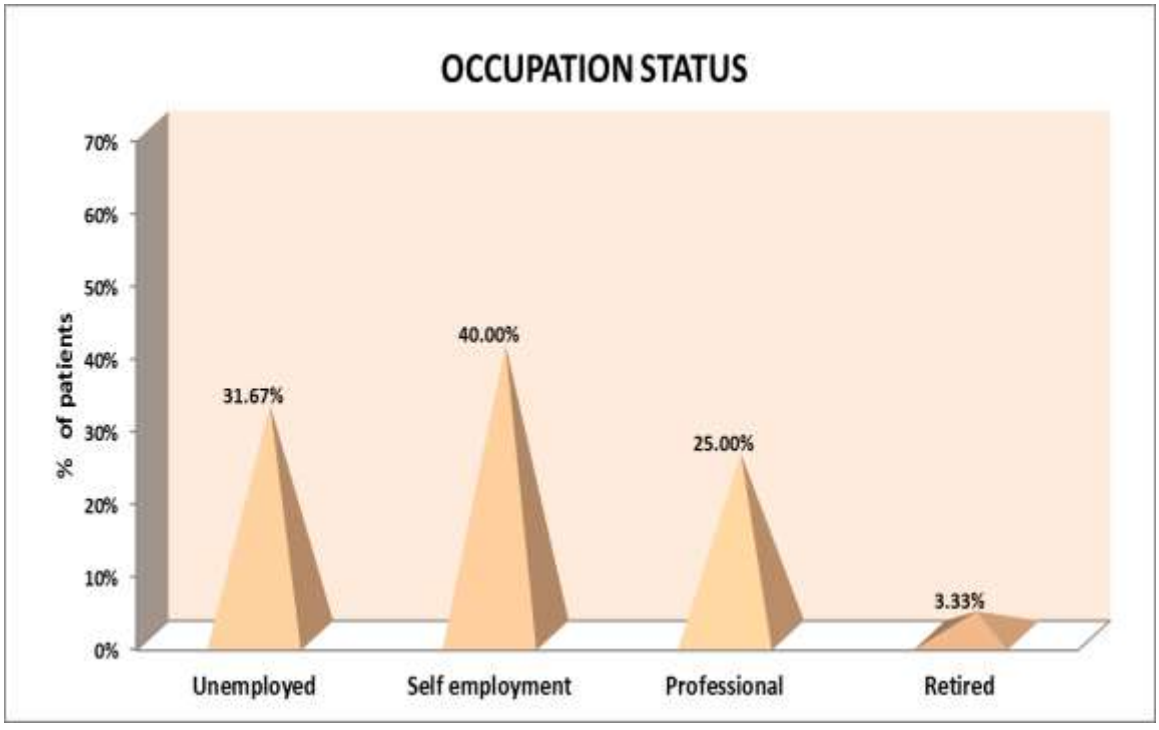


Figure 5: Distribution of subjects based on Occupation

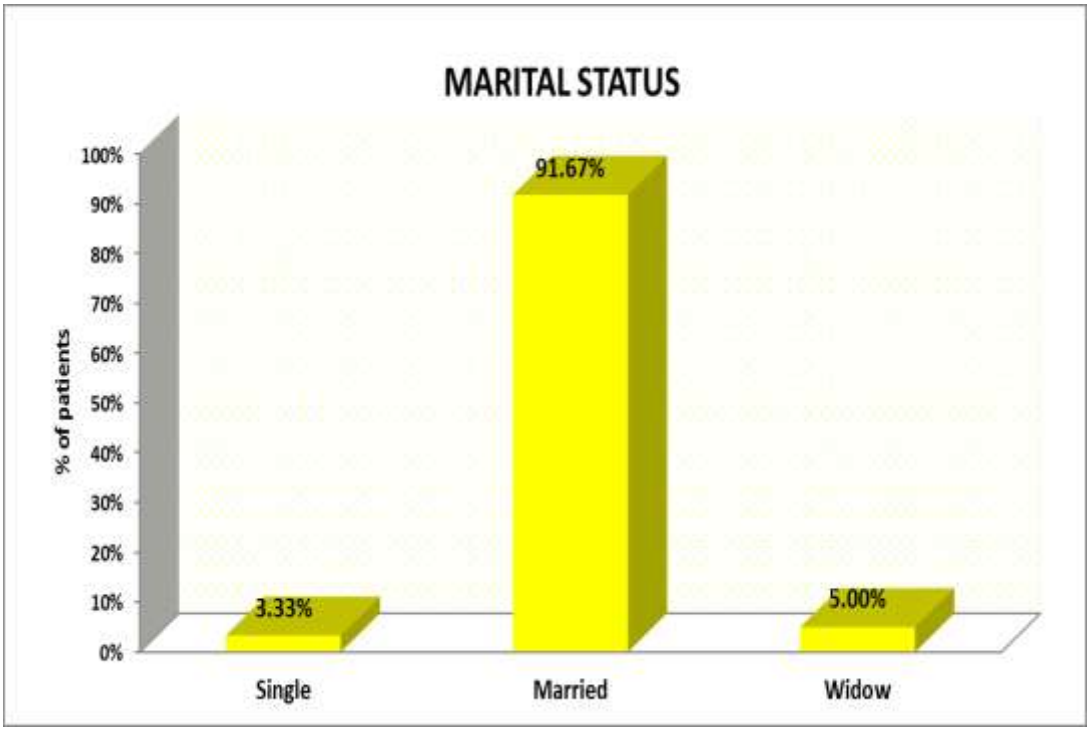


Figure 6: Distribution of Respondents based on Marital Status

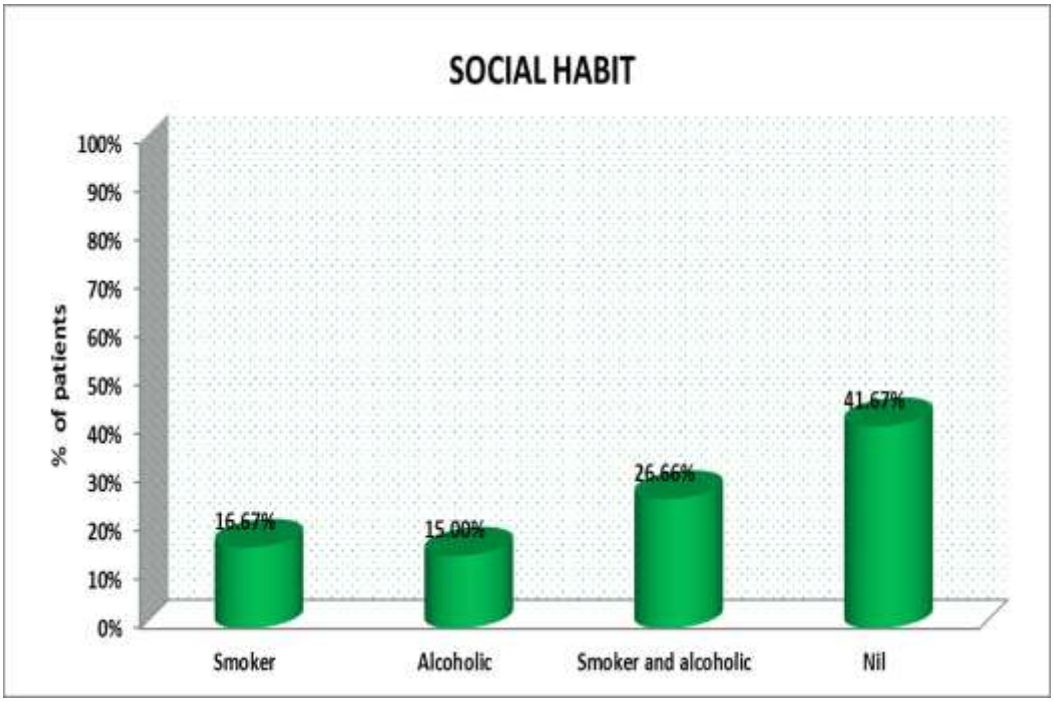


Figure 7: Distribution of Respondents based on Social Habits

SECTION- B

DESCRIPTION OF CLINICAL CHARACTERISTICS

Table 2: Description of Clinical Characteristics of Respondents

N=60

Sl.No.	Clinical Characteristics	Frequency(f)	Percentage (%)
1.	Sedative dosage		
	No sedation	29	48.33
	Mild sedation	25	41.67
	Moderate sedation	6	10.00
	Severe	0	
2.	No. of vasopressors		
	1	32	53.33
	2	16	26.67
	>2	12	20.00
3.	Delirium		
	Present	5	8.33
	Absent	55	91.67
4.	Days restrained		
	1-3 days	2	3.3
	4-6 days	13	21.7
	>6 days	45	75.0
5.	Days sedated		
	1-3 days	23	38.3
	4-6 days	13	21.7
	>6 days	24	40
6.	Days on vasopressors		
	1-3 days	26	43.3
	4-6 days	15	25
	>6 days	19	31.7

7.	Days in ICU 1-3 days 4-6 days >6 days	 3 19 38	 3 31.7 63.3
8.	APACHE II Score 10-14 15-19 20-24 25-29 30-34 >34	 0 15 24 10 10 1	 0 25.00 40.00 16.67 16.67 1.66

Table 2 describes that out of 60 subjects 48% were not having sedation and 42 % were having mild sedation. 20% were using more than 2 vasopressors, 92% did not developed delirium, 75% were restrained for more than 6 days,40% were sedated more than 6 days, 43% were under 3 days on vasopressors, 63% stayed in ICU for more than 6 days and 40% had APACHE II score between 20 and 24.

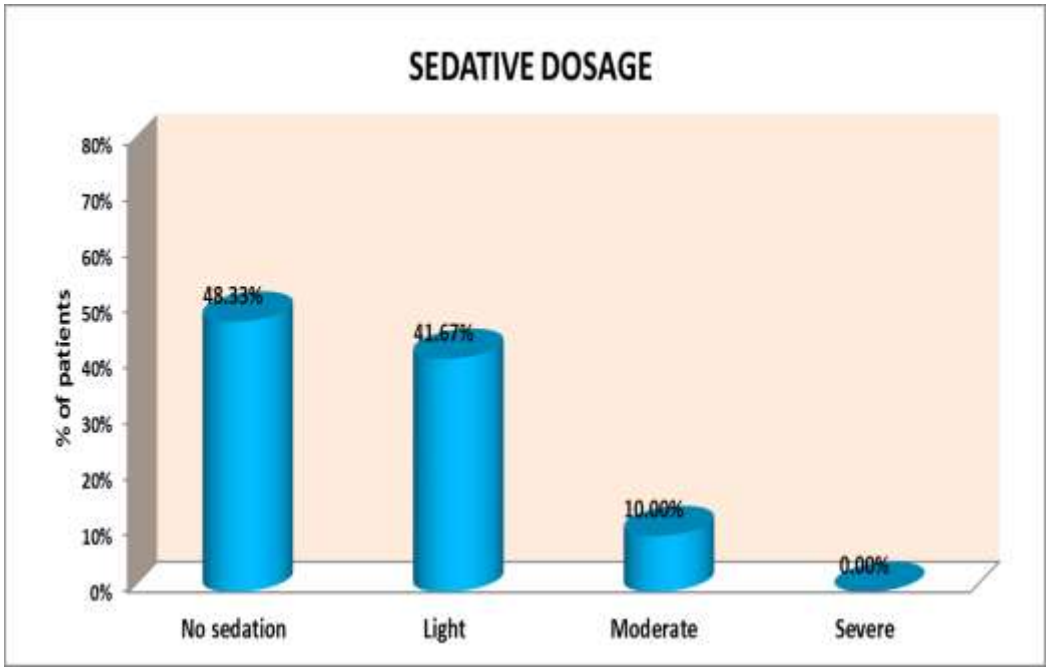


Fig 8: Distribution of Respondents based on Level of Sedation

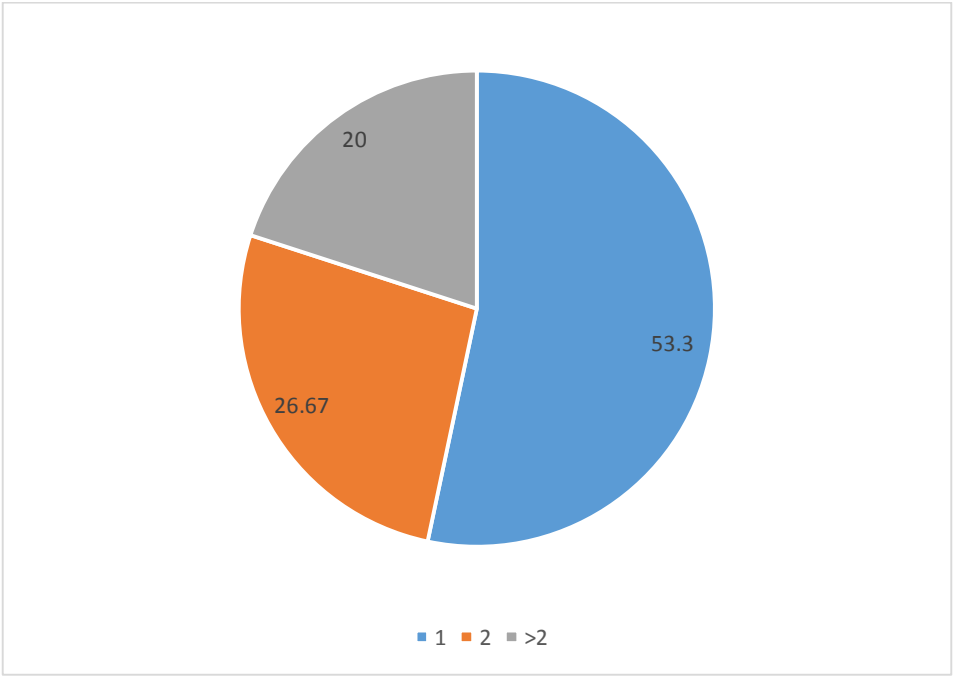


Fig 9: Distribution of Respondents based on No. of vasopressors

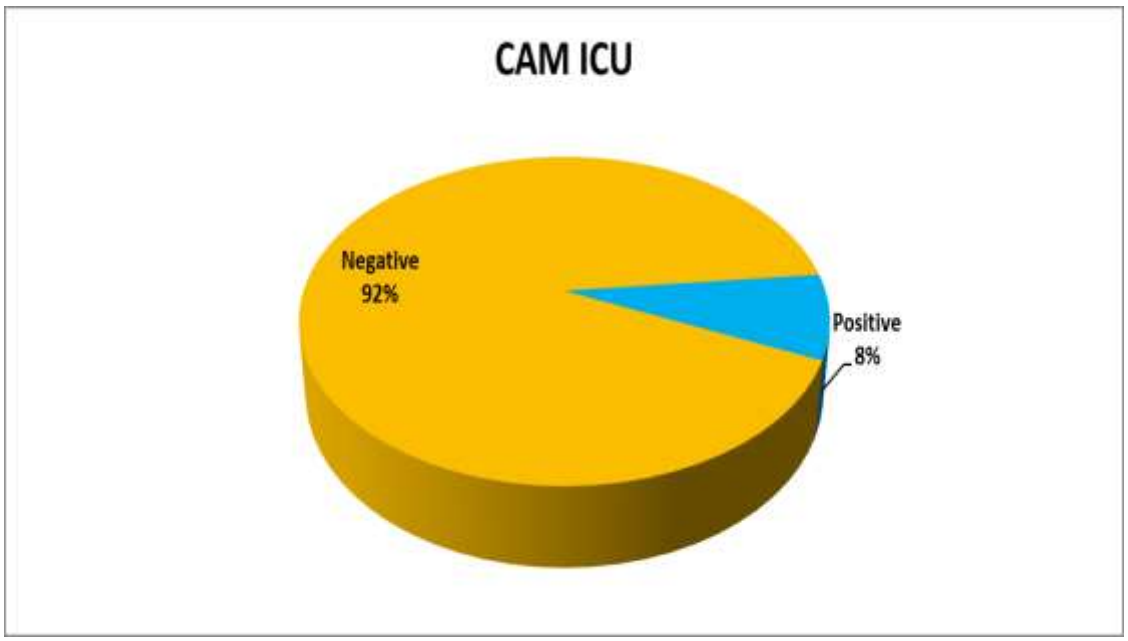


Fig 10: Distribution of Respondents based on presence of delirium

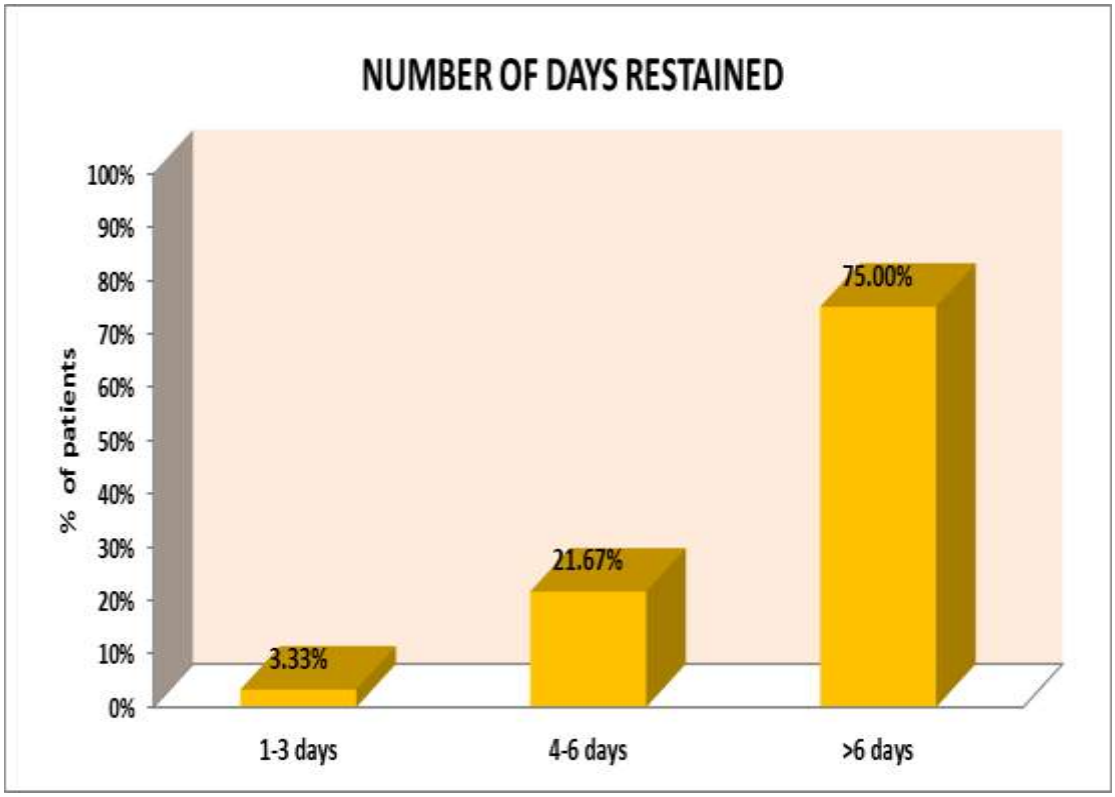


Fig 11: Distribution of Respondents based on Days on restraints

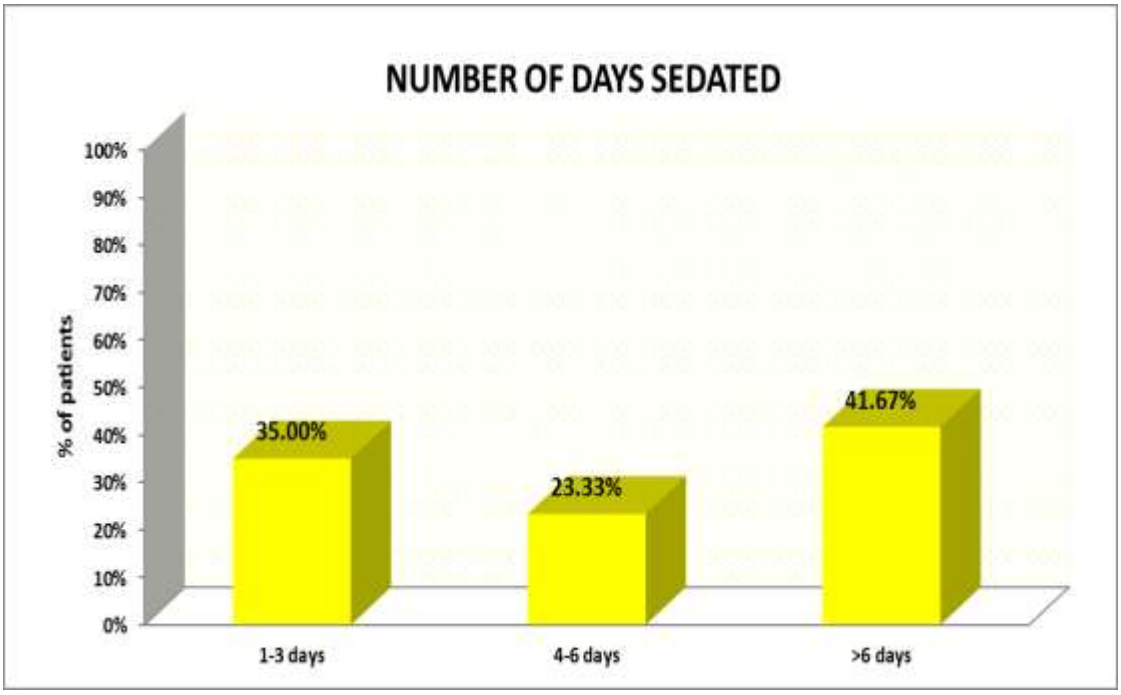


Fig 12: Distribution of Respondents based on No. of days sedated

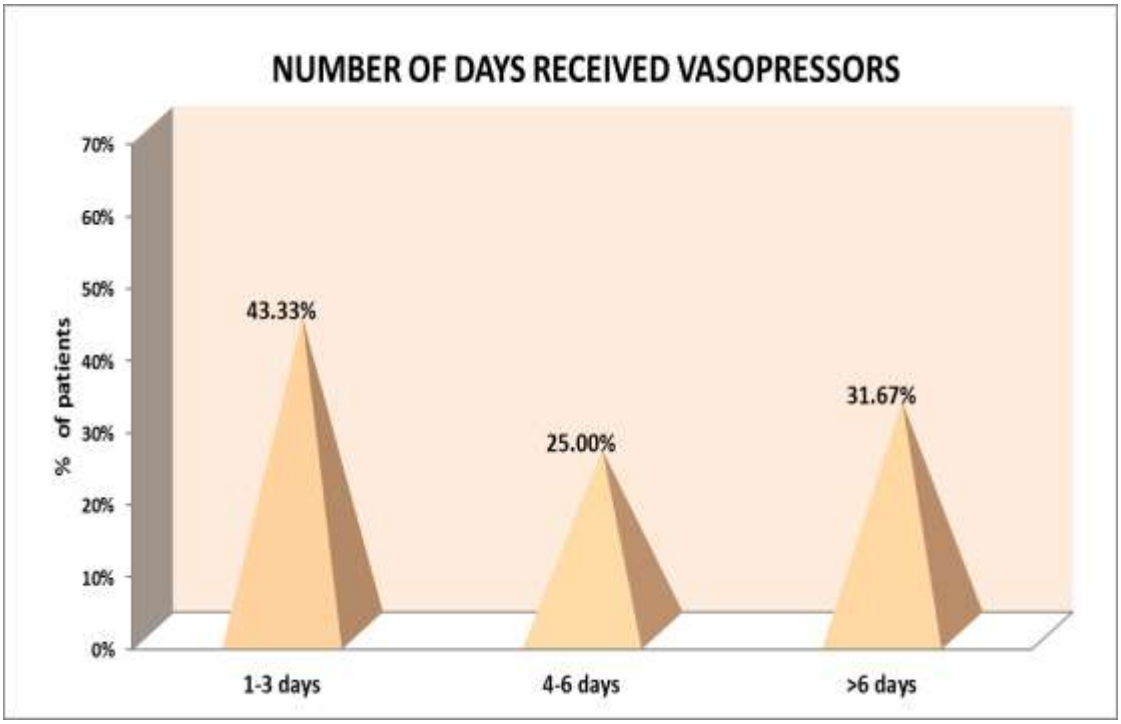


Fig 13: Distribution of Respondents based on No. of days on vasopressors

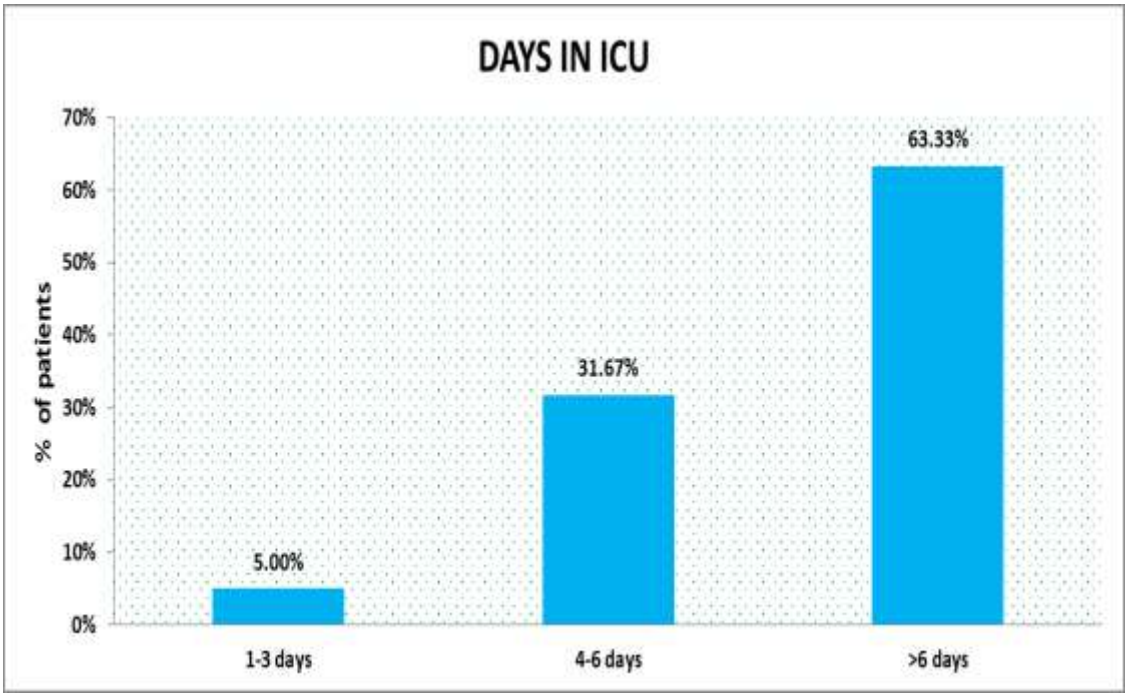


Fig 14: Distribution of Respondents based on No. of days in ICU

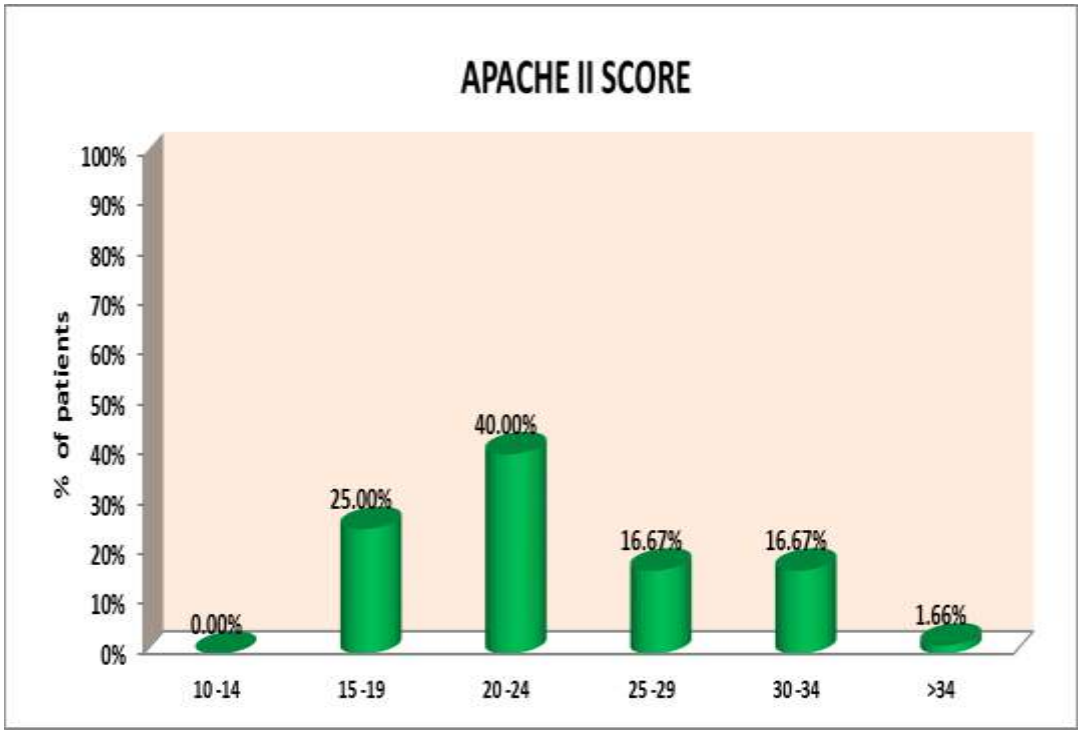


Fig 15: Distribution of Respondents based on APACHE II Score

SECTION: C

ASSESSMENT OF PTSS AND ANXIETY AMONG PATIENTS AFTER DISCHARGE FROM ICU

Table 3: Description of Respondents based on the assessment of PTSS

Sl. No.	Variable		Frequency (f)	Percentage (%)
1.	PTSS	Low Level < 45	20	33
		High Level > 45	40	67

Table 3 shows that out of 60 subjects, 33% of them were having less PTSS score and 67% were having greater level of PTSS score.

Table 4: Description of Respondents based on the assessment of State Anxiety

Sl.No.	Variable		Frequency	Percentage (%)
1.	State Anxiety	Mild anxiety (20-37)	8	13
		Moderate (38-44)	38	64
		Severe (45-80)	14	23

Table 4 shows 13% of the patients are having mild level of state anxiety, 64% of the patients are having moderate level of state anxiety and 23% of them are having severe level of state anxiety.

Table 5: Description of respondents based on the assessment of Trait Anxiety

Sl.No.	Variable		Frequency	Percentage (%)
1.	Trait anxiety	Mild anxiety (20-37)	21	35
		Moderate (38-44)	37	61.7
		Severe (45-80)	2	3.3

Table 5 shows 35.0% of the patients are having mild level of trait anxiety, 61.7% of the patients are having moderate level of trait anxiety and 3.3% of them are having severe level of trait anxiety

SECTION-D

CORRELATION OF THE PTSS AND ANXIETY OF PATIENTS DISCHARGED FROM ICU

Table 6: Correlation between PTSS and Anxiety

Sl. No.	Variables	Mean	SD	Karl Pearson Correlation Coefficient
1.	PTSS State anxiety	51.56 57.60	10.03 9.40	r=0.75 , p=0.01**

****p<0.01 high significant**

Table 6 shows that there is a positive correlation between PTSS and state anxiety at P value <0.01.

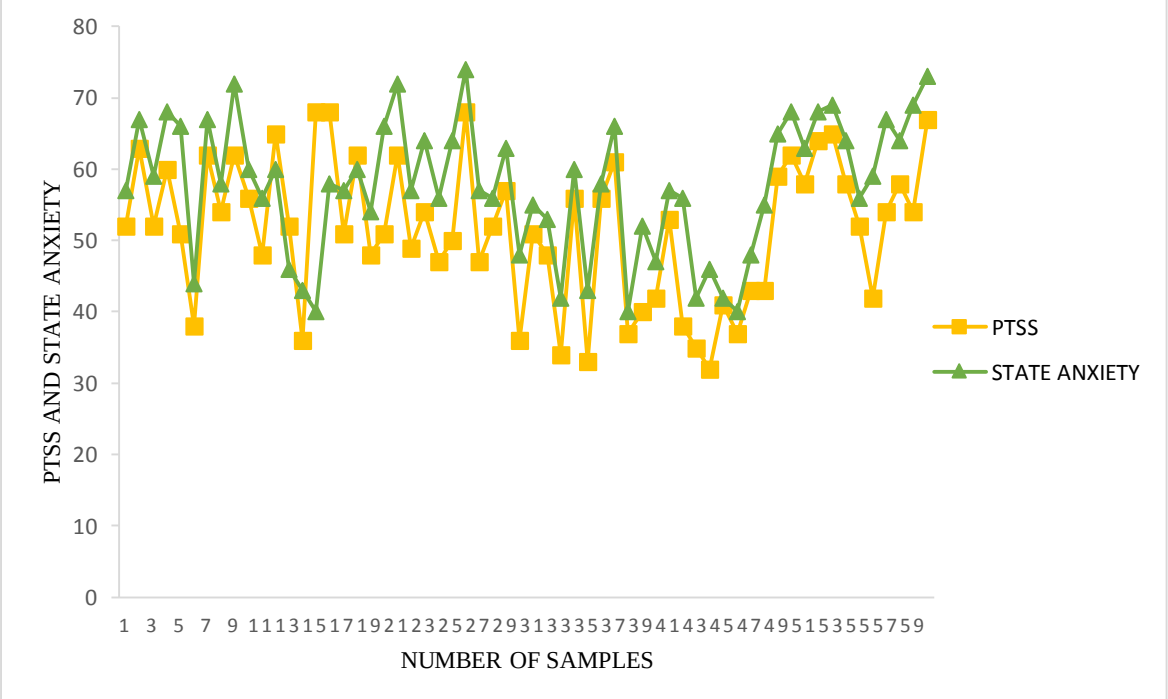


Fig 16 Shows the correlation between PTSS and State Anxiety.

SECTION - E

ASSOCIATION OF PTSS AND ANXIETY WITH SELECTED DEMOGRAPHIC AND CLINICAL VARIABLES

Table 7: Association between PTSS and Demographic Variables

Sl. No.	Demographic variables		PTSS Score				N	Chi square value, P value
			Low PTSS		High PTSS			
			N	%	N	%		
1.	Age	17-35 years	0	0.0	5	100	5	5.89,
		36-50 years	4	21.1	15	78.9	19	**P=0.04(S)**
		51-70 years	16	44.4	20	55.6	36	
2.	Sex	Male	18	43.9	23	56.1	41	6.50,
		Female	2	10.5	17	89.5	19	**P=0.01(S)**
3.	Education status	Illiterate	1	16.7	5	83.3	6	1.02,
		Primary education	6	35.3	11	64.7	17	P= 0.80(NS)
		High school	8	38.1	13	61.9	21	
		Graduate	5	31.2	11	68.8	16	
4.	Marital status	Single	0	0.00	2	100	2	1.03,
		Married	19	34.5	36	65.5	55	P=0.60(NS)
		Widowed	1	33.3	2	66.7	3	
5.	Occupational status	Unemployed	4	21.1	15	78.9	19	3.68,
		Self employed	9	37.5	15	62.5	24	P=0.30(NS)
		Professsional	7	46.7	8	53.3	15	
		Retired	0	0.0	2	100	2	
6.	Social habit	Smoker	3	30.0	7	70	10	
		Alcoholic	2	22.2	7	77.8	9	1.35,
		Smoking and alcoholic	7	43.8	9	56.2	16	P=0.72(NS)
		Both	8	32.0	17	68.0	25	

Table 7 shows the association between PTSS and demographic variables. PTSS is associated with age and sex as indicated by the p values 0.04 and 0.01 respectively.

Table 8: Association between PTSS and Clinical Characteristics

Sl. No.	Clinical Characteristics		PTSS Score				N	Chi square value, P value
			Low PTSS		High PTSS			
			N	%	n	%		
1.	Sedative dosage	No sedation	17	58.6	12	41.4	29	16.31,
		Mild sedation	2	8.0	23	92	25	**P=0.001(S)**
		Moderate sedation	1	16.7	5	83.3	6	
		Severe sedation	0	0.0	0	0.0	0	
2.	No. of vasopressors	One	18	56.2	14	43.8	32	16.21,
		Two	1	6.2	15	93.8	16	**P=0.001(S)**
		>2	1	8.3	11	91.7	12	
3.	Delirium	Present	1	20.0	4	80	5	0.43,
		Absent	19	34.5	36	65.5	55	P= 0.51(NS)
4.	No. of restrained	1-3	1	50.0	1	50.0	2	3.61,
		4-6	7	53.8	6	46.2	13	P=0.16(NS)
		>6	12	26.7	33	73.3	45	
5.	Days sedated	1-3	13	61.9	8	38.1	21	14.97,
		4-6	5	35.7	9	64.3	14	**P=0.001(S)**
		>6	2	8.0	23	92.0	25	
6.	Days received vasopressors	1-3	12	46.2	14	53.8	26	3.51,
		4-6	4	26.7	11	73.3	15	P=0.17(NS)
		>6	4	21.2	15	78.8	19	
7.	Days in ICU	1-3	2	66.7	1	33.3	3	4.77,
		4-6	9	47.4	10	52.6	19	**P=0.04(S)**
		>6	9	23.7	29	76.3	38	
8.	APACHE II Score	10-14	0	0.0	0	0.0	0	10.23,
		15-19	9	60.0	6	40.0	15	**P= 0.04(S)**
		20-24	7	29.2	17	70.8	24	
		25-29	2	20.0	8	80.0	10	
		30-34	1	10.0	9	90.0	10	
		>34	1	100	0	0.0	1	

Table 8 shows the association between PTSS and clinical variables among patients discharged from ICU. PTSS is associated with sedative dosage, number of vasopressors, days sedated and APACHE II as indicated by the p values.

Table 9: Association between State Anxiety (STAI Y-1) and Demographic variables

Sl. no.	Demographic variables		State anxiety STAI Y1						N	Chi square value, P value
			Mild		Moderate		Severe			
			N	%	N	%	n	%		
1.	Age	17-35 years	0	20	8	60.0	1	20	9	**10.19,**
		36-50 years	5	26.3	12	63.2	13	10.5	30	**P=0.04(S)**
		51-70 years	3	8.3	18	91.7	0	0.0	21	
2.	Sex	Male	6	14.6	25	85.4	0	0.0	31	**6.85,**
		Female	2	10.5	13	73.7	14	15.8	29	**P=0.03(S)**
3.	Educati	Illiterate	1	16.7	4	66.7	10	16.7	15	**6.16,**
	on	Primary education	1	5.9	15	88.2	2	5.9	18	**P= 0.40(NS)**
	status	High school	2	9.5	15	90.5	0	0.0	17	
		Graduate	4	25.0	4	68.8	2	6.3	10	
4.	Marital	Single	0	50.0	1	50.0	0	0.0	1	**3.78,**
	status	Married	7	10.9	35	83.6	14	5.5	56	**P=0.43(NS)**
		widowed	1	33.3	2	66.7	0	0.0	3	
5.	Occupa-	Unemployed	2	10.5	16	80.0	10	5.3	28	**0.92,**
	tional	Self employed	4	16.7	17	79.2	2	4.2	23	**P=0.98(NS)**
	status	Professional	2	13.3	3	80.0	2	6.7	7	
		Retired	0	0.0	2	100	0	0.0	2	
		Smoker	2	20.0	8	80.0	0	0.0	10	
6.	Social	Alcoholic	0	0.0	9	100	0	0.0	9	**5.14,**
	habit	Smoking and alcoholic	1	6.3	10	87.5	10	6.3	21	**P=0.52(NS)**
		Both	5	20.0	11	72.0	4	8.0	20	

Table 9 showed that the association between State anxiety and demographic variables. State anxiety scores were associated with age and sex as indicated by p=0.04 and p=0.03 respectively.

Table 10: Association between State Anxiety (STAI Y-1) And Clinical characteristics

Sl. No.	Clinical characteristics		State anxiety STAI Y1						n	Chi square value, P value
			Mild		Moderate		Severe			
			n	%	N	%	N	%		
1.	Sedative dosage	No sedation	7	24.1	15	75.9	0	0.0	22	16.71,
		Mild	1	4.0	19	92.0	6	4.0	26	**P=0.01(S)**
		Moderate	0	0.0	4	66.7	8	33.3	12	
		Severe	0	0.0	0	0.0	0	0.0	0	
2.	No. of vasopressors	1	2	6.3	18	87.5	4	6.3	24	3.81,
		2	3	18.8	12	75.0	10	6.3	25	**P=0.043(S)**
		>2	3	25.0	8	75.0	0	0.0	11	
3.	Delirium	Present	1	20.0	4	80.0	0	0.0	5	0.45,
		Absent	7	12.7	34	81.8	14	5.5	55	P=0.73(NS)
4.	No. of days restrained	1-3	0	0.0	2	100	0	0.0	2	0.74,
		4-6	2	15.4	10	76.9	1	7.7	13	P=0.95
		>6 days	6	13.3	37	82.2	2	4.4	45	(NS)
5.	Days sedated	1-3	0	0.0	16	100	0	0.0	16	10.99,
		4-6	2	14.3	14	85.7	0	0.0	16	**P=0.02(S)**
		>6 days	6	24.0	8	64.0	14	12.0	28	
6.	Days received vaso-pressors	1-3	2	7.7	18	84.6	4	7.7	24	2.78,
		4-6	3	20.0	10	73.3	10	6.7	23	P=0.57
		>6 days	3	15.8	10	84.2	0	0.0	13	(NS)
7.	Days in ICU	1-3	0	0.0	3	100	0	0.0	3	2.82
		4-6	2	10.5	16	89.5	0	0.0	18	P=0.57
		>6 days	6	15.8	19	76.3	14	7.9	39	(NS)
8.	APACHE II Score	10-14	0	0.0	0	0.0	0	0.0	0	5.36,
		15-19	4	26.7	10	66.7	4	6.7	18	P= 0.72
		20-24	3	12.5	10	83.3	4	4.2	17	(NS)
		25-29	0	0.0	8	90.0	6	10.0	14	
		30-34	1	10.0	9	90.0	0	0.0	10	
		>34	0	0.0	1	100	0	0.0	1	

Table 10 depicts the association between state anxiety and clinical variables. State anxiety was associated with sedative dosage and days sedated as confirmed by the chi square tests indicated by the values.

Table 11: Association between Trait Anxiety (STAI Y-2) and Demographic Variables

Sl. No.	Demographic variables		Trait anxiety STAI Y2						N	Chi square value, P value
			Mild		Moderate		Severe			
			n	%	n	%	N	%		
1.	Age	17-35 years	0	0.0	4	80.0	1	2.0	5	9.30,
		36-50 years	5	26.3	13	68.4	1	5.3	19	**P=0.05(S)**
		51-70 years	16	44.4	20	55.6	0	0.0	36	
2.	Sex	Male	15	36.6	24	58.5	2	4.9	41	1.22, P=0.54(NS)
		Female	6	31.6	13	68.4	0	0.0	19	
3.	Education status	Illiterate	3	50.0	3	50.0	0	0.0	6	4.53,
		Primary education	6	35.3	11	64.7	0	0.0	17	P= 0.60(NS)
		High school	7	33.3	12	57.1	2	9.5	21	
		Graduate	5	31.3	11	68.8	0	0.0	16	
4.	Marital status	Single	2	50.0	0	50.0	0	0.0	2	10.12,
		Married	16	29.1	37	67.3	2	3.6	55	**P=0.04(S)**
		Widowed	3	100	0	0.0	0	0.0	3	
5.	Occupa-tional status	Unemployed	5	26.3	14	73.7	1	0.0	19	4.92,
		Self employed	10	41.7	12	50.0	2	8.3	24	P=0.55(NS)
		Professional	5	33.3	10	66.7	0	0.0	15	
		Retired	1	50.0	1	50.0	0	0.0	2	
6.	Social habit	Smoker	2	20.0	8	80.0	0	0.0	10	
		Alcoholic	3	33.3	6	66.7	0	0.0	9	7.58,
		Smoking and alcoholic	5	31.3	9	56.3	2	12.5	16	P=0.27(NS)
		Both	11	44.0	14	56.0	0	0.0	25	

Table 11 shows the association between trait anxiety score (STAI Y-2) and demographic variables. Younger age patients and married patients are having more score than others. It was confirmed using chi square test.

Table 12: Association between Trait Anxiety and Clinical characteristics

Sl. No.	Clinical variables		Trait anxiety STAI Y2						N	Chi square value, P value
			Mild		Moderate		Severe			
			n	%	n	%	N	%		
1.	Sedative dosage	No sedation	15	51.7	14	48.3	0	0.0	29	11.21, p=**0.02(S)**
		Mild	6	24.0	18	72.0	1	4.0	25	
		Moderate	0	0.0	5	83.3	1	16.7	6	
		Severe	0	0.0	0	0.0	0	0.0	0	
2.	No. of vasopressors	1	11	34.4	20	62.5	1	3.1	32	2.44, p=0.65 (NS)
		2	4	25.0	11	68.8	1	6.3	16	
		>2	6	50.0	6	50.0	0	0.0	12	
3.	Delirium	Present	1	20.0	4	80.0	0	0.0	5	0.83, p=0.66(NS)
		Absent	20	36.4	33	60.0	2	3.6	55	
4.	No. of days restrained	1-3	0	0.0	2	30.0	0	0.0	2	5.01, p=0.28 (NS)
		4-6	2	15.4	10	76.9	1	7.7	13	
		>6 days	19	42.2	25	55.6	1	2.2	45	
5.	Days sedated	1-3	5	23.8	15	71.4	1	4.8	21	4.05, p=0.40 (NS)
		4-6	4	28.6	10	71.4	0	0.0	14	
		>6 days	12	48.0	12	48.0	1	4.0	25	
6.	Days received vasopressors	1-3	4	15.4	21	80.8	1	3.8	26	9.85, **p=0.04(S)**
		4-6	6	40.0	8	53.3	1	6.7	15	
		>6 days	11	57.9	8	42.1	0	0.0	19	
7.	Days in ICU	1-3	1	33.3	2	66.7	0	0.0	3	1.63 p=0.80 (NS)
		4-6	8	42.1	11	57.9	0	0.0	19	
		>6 days	12	31.6	24	63.2	2	5.3	38	
8.	APACHE II Score	10-14	0	0.0	0	0.0	0	0.0	0	3.46, p= 0.90 (NS)
		15-19	6	40.0	8	53.3	1	6.7	15	
		20-24	9	37.5	14	58.3	1	4.2	24	
		25-29	2	20.0	8	80.0	0	0.0	10	
		30-34	4	40.0	6	60.0	0	0.0	10	
		>34	0	0.0	1	1.6	0	0.0	1	

Table 12 shows that Trait anxiety was associated with sedative dosage and days received vasopressors as indicated by p=0.02 and p=0.04 respectively.

CHAPTER-V

DISCUSSION, SUMMARY, CONCLUSION, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS

DISCUSSION:

The present study was designed to assess the post-traumatic stress symptoms and anxiety among patients after discharge from ICU, to correlate post-traumatic stress symptoms and anxiety, and to associate the post-traumatic stress symptoms and anxiety with selected demographic and clinical variables.

Demographic characteristics of the subjects after discharge from ICU were:

Out of 60 subjects, 60% of the selected subjects comes under the age group of 51-70 years. 68% were males among the selected samples. Based on education, 28% had primary education and 35% had high school education. 40% were self-employed and 93% were married. Based on social habits, 27% were both smoker and alcoholic and 41% didn't had either smoking or alcohol.

Clinical characteristics of subjects after discharge from ICU were:

Out of 60 subjects 48% were not having sedation and 41 % were having mild sedation. 20% were using more than 2 vasopressors, 9% developed delirium, 75% were restrained for more than 6 days,40% were sedated more than 6 days, 43% were under 3 days on vasopressors, 63% stayed in ICU for more than 6 days and 40% had APACHE II score between 20 and 24 that indicates 40% of predicted mortality.

The first objective was to assess the posttraumatic stress symptoms and anxiety among patients after discharge from ICU.

In the present study the investigator has find that out of 60 subjects, 33% of them were having low level of PTSS and 67% were having high level of PTSS and mean score of PTSS was 51.56 with Standard Deviation 10.03. 13% of the patients were having mild level of state anxiety, 64% of the patients were having moderate level of state anxiety and 23% of them were having severe level of state anxiety with a mean score of 57.6 and SD 9.4. 35.0% of the patients were having mild level of trait anxiety, 61.7% of the patients were having moderate level of trait anxiety and 3.3% of them were having severe level of trait anxiety with a mean score of 46.31 and SD 9.88.

The present study is consistent with the study of **Myhren et al., (2010)** which also had PTSS and anxiety among patients after ICU discharge. 194 cases were allocated for the study and the selected participants completed the Impact of Event Scale (IES), Hospital Anxiety and Depression Scale (HADS), Life Orientation Test (LOT) at 4 to 6 weeks, 3 and 12 months and ICU memory tool at the first assessment whereas in the current study the investigator has used PTSS 14 question inventory to measure the post traumatic stress symptoms and STAI inventory to assess the state and trait anxiety. The study results of the previous study were half of the patients had PTSD-related symptoms indicated by IES-total ≥ 20 and high levels of psychological distress and anxiety confirmed by higher HADS score of 10.5 patients one year after intensive care treatment. The current study revealed that 67% of the respondents had developed high level of PTSS and 33% had low level of PTSS and most of them developed moderate to severe level of state anxiety. Predictors for the symptoms according to Myhren et al., were unemployment, Length of stay in ICU, mechanically ventilated and personality trait (optimism) whereas the predictors of PTSS in the present study included age, sex, sedative dosage, number of vasopressors, days sedated, days in ICU and severity of illness.

The second objective was to correlate posttraumatic stress symptoms with anxiety among patients after discharge from ICU:

In the present study, there is a mild positive correlation between PTSS and state anxiety with computed r value of 0.75 at P value <0.01. This was not in consistent with the study results of **Castillo et al., (2015)** who conducted a prospective study to determine the state and trait anxiety during critical illness and posttraumatic stress symptoms over 6 months after ICU discharge. State anxiety was assessed with Faces Anxiety Scale during ICU stay and trait anxiety was measured using State Trait Anxiety Inventory Form Y-2 whereas in the current study, both state and trait anxiety was assessed using State Trait Anxiety Inventory Y-1 and Y-2. Posttraumatic stress symptoms were assessed during 3 and 6 months after ICU discharge using Post traumatic stress symptom 10 question inventory and in the present study PTSS was assessed using the modified version of PTSS-10 i.e., PTSS 14 inventory which had a high validity and reliability than PTSS-10. His study results manifested 57% of participants with moderate to severe levels of state anxiety and 43% had high level of trait anxiety which was in line with the results of the present study that had 64% with

moderate levels of state anxiety and 62% moderate levels of trait anxiety. High levels of posttraumatic stress symptoms occurred at 3 and 6 months post ICU discharge and in the present study PTSS was assessed only at one time. In the current study, PTSS had association with age, sex, sedative dosage, number of vasopressors, days sedated, days in ICU and severity of illness. This was not in consistent with the previous study that had no significant difference in gender, APACHE III score and length of ICU stay and PTSS had no correlation with state anxiety.

The third objective was to associate posttraumatic stress symptoms and anxiety among patients after discharge from ICU with selected demographic and clinical variables:

The present study had developed PTSS with a mean score of 51.56 which was consistent with the study conducted by **Sadat Z. et al., (2015)** in which the prevalence of posttraumatic stress disorder and related factors among patients discharged from Critical Care Units in Kashan, Iran was assessed. 332 subjects were participated in the study. PTSD checklist were used in the study and was answered one month after ICU discharge whereas the investigator has used PTSS 14 questionnaire to assess the post-traumatic stress symptoms. 48.2% of patients in ICUs (n = 160) had symptoms of PTSD based on PCL score ≥ 45. The mean PCL score was 44.24 ± 19.89 in all samples. PTSD was more prevalent among single patients, unemployed and in those older patients, having more children and longer hospitalization and having a history of drugs abuse. The PTSD was also more common among patients with additional comorbidities and those who used ventilator during intensive care. In the current study, PTSS is associated with age and sex and this finding is consistent with Sadat et al., in terms of age whereas it is not consistent in terms of gender. In the present study, sedative dosage, number of vasopressors, days sedated, days in ICU and APACHE II were associated with PTSS.

The present study is consistent with the results of study conducted by **Warlan H. et al., (2016)** that detected post-traumatic stress symptoms in patients after discharge from intensive care and 17% of the sample met diagnostic criteria for PTSD. Risk of PTSD was associated with a history of depression (□2 = 5.6; P = .02), moderate levels of sedation ((□2 = 9.9; P = .02), and delirium ((□2 = 7.4; P = .02). In the present study, PTSS is associated with number of vasopressors, days sedated and being female which was not in consistent with the study results of Warlan et al. Also, in the current study,

PTSS is associated with sedative dosage which is consistent with the results of Warlan et al. Days restrained and days received vasopressors is not associated with the development of PTSS which is same as with the results of Warlan et al. The current study results showed no association of delirium with PTSS whereas the previous study results showed association of PTSS with delirium.

SUMMARY:

The purpose of the study is to assess the posttraumatic stress symptoms and anxiety among patients after discharge from ICU. The study was conducted at KMCH, Coimbatore.

The objectives of the study were to:

- Assess the posttraumatic stress symptoms and anxiety among patients after discharge from ICU.
- Correlate PTSS and anxiety of patients after discharge from ICU
- Associate the posttraumatic stress symptoms and anxiety with selected demographic and clinical variables.

The correlational descriptive design was used for the study. The population of the study was 60 subjects who had discharged from ICU weaned from mechanical ventilation. The study was based on modified Roy's Adaptation theory. The subjects was selected by purposive sampling technique. The demographic and clinical characteristics were taken from the medical records and data collection was done by using the PTSS 14 questionnaire and STAI Y1 and STAI Y2 after discharge from ICU. Descriptive tests were used for the statistical analysis. Karl Pearson test was used to identify the correlation between PTSS and anxiety and Chi square tests was used to find the association of PTSS and anxiety with selected demographic and clinical variables. The study was tested and accepted the hypotheses.

Major findings of the study

- 33.3% of them were having less PTSS score and 66.7% were having greater level of PTSS score.
- 13.0% of the patients were having mild level of state anxiety, 64.0% of the patients were having moderate level of state anxiety and 23.0% of them are having severe level of state anxiety.

- 35.0% of the patients were having mild level of trait anxiety, 61.7% of the patients were having moderate level of trait anxiety and 3.3% of them were having severe level of trait anxiety.
- There is a positive correlation between PTSS and state anxiety with computed r value of 0.75 at P value <0.01.
- PTSS is associated with age and sex as indicated by the p values 0.04 and 0.01 respectively. PTSS is associated with sedative dosage (p=0.001), number of vasopressors (p=0.001), days sedated (p=0.001) and APACHE II (p=0.04).
- State anxiety were associated with age and sex as confirmed by the chi square test indicated by the p values (p=0.04, p=0.03). State anxiety was associated with sedative dosage and days sedated as confirmed by the chi square tests indicated by p=0.01 and p=0.02
- Trait anxiety was associated with younger age (p=0.05) and married patients (p=0.04) which was confirmed using chi square test. Trait anxiety was associated with sedative dosage (p=0.02) and days received vasopressors (p=0.04).

CONCLUSION

Technological advancements in the health care setting has reduced the mortality rate of human beings but their emotional consequences also need to be concerned. PTSS 14 and STAI was useful to identify the level of posttraumatic stress symptoms and anxiety among patients after discharge from ICU, KMCH, Coimbatore.

IMPLICATION

Posttraumatic stress symptoms and anxiety among patients after discharge from ICU are developed mainly because of the therapeutic interventions and the technological advancements in recent use. The dosage of sedation, number of days sedated and the number of vasopressors being used makes the patient more prone to develop posttraumatic stress symptoms and anxiety. Thereby, reducing the dosage of sedation or number of vasopressors can reduce the emotional consequences of the ICU patients.

Implication for Nursing Education:

- The nurse educator can provide in-service education to all students and the staff nurses on the methods to reduce the impact of ICU interventions that makes the patients expose to posttraumatic stress disorder and anxiety.
- The staff nurses and students can be educated to have concern not only on the curative aspects but also on the psychological impact that the ICU interventions do.

Implications for nursing practice:

- The findings of the study highlights the impact of vasopressors and sedation on the development of posttraumatic stress symptoms.
- This study thus creates the awareness among nurses to reduce the sedation and vasopressors and thereby reduce the development of posttraumatic stress symptoms.
- This study helps the nurses to be aware of the need to provide counselling and reassure of their recovery and to give proper and clear information about their health condition.
- This also gives awareness to minimize the length of ICU stay as soon as possible thereby reducing the emotional consequences of being critically ill.

Implications for nursing administration:

- The nurse administrative can motivate the nursing personnel to carry out small projects or workshop regarding the need for educating the importance of need to take care on the development of posttraumatic stress symptoms.
- Nurse administrators can educate the nursing staff to taper the sedation level and use of vasopressors to reduce the posttraumatic stress symptoms.
- Nurse administrator can motivate the nursing staff and students to update their knowledge on the prevention and management of posttraumatic stress symptoms and anxiety after discharge from ICU.

LIMITATIONS:

- In this study only one time observation was done for the participants.
- Effect of change over time was not analysed.
- Days of mechanical ventilation was not included in the study.
- The samples were not randomly selected.

RECOMMENDATIONS

- Experimental study can be conducted to determine the effectiveness of interventions on the prevention and management of posttraumatic stress symptoms after discharge from ICU.
- Quality of life can be assessed in patients after ICU discharge.
- Study can be conducted to assess the progress from PTSS to PTSD by doing assessment at 3 months and 6 months.

ABSTRACT

A study entitled **"A study to assess the Post Traumatic Stress Symptoms and Anxiety after discharge from ICU at KMCH, Coimbatore." Objective**: The aim of the study is to assess the Post Traumatic Stress Symptoms and Anxiety after discharge from ICU, to correlate PTSS and Anxiety and to associate PTSS and Anxiety with selected Demographic and Clinical Characteristics. **Design**: Descriptive correlational design. **Setting:** Step down wards of Kovai Medical Center and Hospital, Coimbatore. **Sample Size**: 60 subjects both male and female above the age of 17 years weaned from mechanical ventilator and discharged from ICU were recruited for the study. **Conceptual Framework:** Modified Roy's Adaptation theory. **Data Collection Procedure:** After getting the verbal consent, the demographic data and clinical characteristics were assessed and after discharge from ICU they were asked to complete the PTSS-14 Questionnaire and STAI Inventory. **Results:** Among 60 participants, 33.3% of them were having less PTSS score and 66.7% were having greater level of PTSS score with a mean score of 47.3. 13% of the patients are having mild level of state anxiety, 64% of the patients are having moderate level of state anxiety and 23% of them are having severe level of state anxiety. The mean score of STAI state anxiety was 50.38. 35.0% of the patients are having mild level of trait anxiety, 61.7% of the patients are having moderate level of trait anxiety and 3.3% of them are having severe level of trait anxiety with a mean score of 46.31. **Conclusion:** The study results showed that there is a high level of PTSS and moderate to severe levels of anxiety after discharge from ICU.

REFERENCES

BOOKS

1. Carol, A.L. Marylou, C.C.A. (1999). Understanding the nursing research. Pennyselvania : W.B. Saunders Company.
2. Gupta S.P. (2000) Statistical methods. New Delhi. Sultan Chand & Sons
3. Harrison. (1994). Principles of Internal Medicine. New York. Health Professional Division.
4. Kothari C.R. (2000). Research methodology methods and techniques. New Delhi. Vishwaprakasam Company
5. Paula J. (1992). Nursing process application of conceptual models. Philadelphia: Mosby.
6. Polit and Beck (2012). Nursing research: generating and assessing evidence for nursing practice. New Delhi: Lippincott Williams and Wilkins
7. Sadock B. Ruiz P. (2009).Kaplan and Sadock's comprehensive textbook of psychiatry. Virginia : Lippincott Williams and Wilkins
8. Sreevani R. Prasanthi. N.(2004). A Guide to Mental Health & Psychiatric Nursing. New Delhi: Jaypee Publications.
9. Taylor, R. Willis. Lemone C. Lynn. (2008). Fundamentals of nursing. New Delhi: Lippincott Williams and Wilkins
10. Theodore D. (2013). Textbook of mental health nursing. New Delhi: Elsevier India
11. Urden L., Stacy K., (2014). Critical care nursing: diagnosis and management. New York: Elsevier publications.

ONLINE JOURNAL REFERENCE

12. American Psychiatric Association (2013). Diagnostic And Statistical Manual of Mental disorders. 271-274. Retrieved from https://www.ptsd.va.gov/ professional/ PTSD overview/ dsm5_criteria_ptsd.asp
13. Andreoli. Vannini A. Bruno P. et al., (2010). Posttraumatic stress disorder in intensive care unit patients. Journal of intensive care medicine. 22(1):77-84. Retrieved from http://dx.doi.org/10.1590/S0103-507X2010000100013

14. Althouse B.M., Bienvenu O.J., Colantuoni E. Gellar J. (2013) Posttraumatic stress disorder symptoms after acute ling injury: a 2 year prospective longitudinal study. Journal of psychological medicine. 43(12):2657-2671. Retrieved from https://doi.org/10.1017/S0033291713000214
15. Asimakopoulou E., Maianos M. (2015). Posttraumatic stress disorder after discharge from intensive care unit in Greater Athens Area. Journal of trauma nursing.22(4):209217.Retrieved from https://doi:10.1097 /JTN. 000000000 0000142
16. Battle C.E., James K. Bromfield T.et al., (2017). Predictors of Post-Traumatic Stress Disorder Following Critical Illness: A Mixed Method Study. Journal of the Intensive Care Society. 18(4):289-293. Retrieved from https://journals.sagepub.com/home/jics
17. Breslau N., Troost J.P., Luo. Z. (2013) Influence of predispositions on posttraumatic stress disorder: does it vary by trauma severity? Journal of psychological medicine. 43(2):381-390. Retrieved from https://doi:10.1017/s0033291712001195
18. Brady F. Parkes E. W. Barker C.et al., (2015). Early in session predictors of response to trauma focussed cognitive therapy for PTSD. Journal of behaviour research and therapy. 75(4):40-47. Retrieved from http://dx.doi.org/10.1016/j.brat.2015.10.001
19. Bisson J.M. (2007). Post-traumatic stress disorder: an in depth review. Journal of occupational medicine. 57:399-403. Retrieved from http://doi:10.1093/occmed/kqm069
20. Brewin. Chris R., Andrews B., Valentine J.D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma exposed adults. Journal of consulting and clinical psychology. 68(5):748-766). Retrieved from http://dx.doi.org/10.1037/0022-006X.68.5.748
21. Castillo, M. I., Cooke, M., Macfarlane, B. & Aitken, L. M. (2016). Factors associated with anxiety in critically ill patients: A prospective observational cohort study. *International Journal of Nursing Studies,* 60:225-233. doi:/10.1016/j.ijnurstu.2016.05.007
22. Castillo M.I. Aitken L.M. (2015). In ICU state anxiety is not associated with posttraumatic stress symptoms over 6 months after ICU discharge: a

prospective study. Journal of Australian critical care. 29(3):158-164. Retrieved from https://doi.org/10.1016/j.aucc.2015.09.003

23. Capuzzo M., Cingolani E., Valpondi V.(2005) Posttraumatic stress disorder related symptoms after intensive care. Minerva anestesiologica.71:167-169. Retrieved from https://www.minervamedica.it
24. De bont P. Van Minnen A. Jongh A. (2013). Treating PTSD in Patients with Psychosis: A Within-Group Controlled Feasibility Study Examining the Efficacy and Safety of Evidence-Based PE and EMDR Protocols. Journal of behaviour therapy. 44(4):717-730. Retrieved from https://doi.org/10.1016/j.beth.2013.07.002
25. Davydow D.S, Hough C L, Katon W.J, (2013). A longitudinal investigation of posttraumatic stress and depressive symptoms over the course of the year following medical-surgical intensive care unit admission. Journal of General Psychiatry.35:226-232. Retrieved from https://www.journals.elsevier.com/ general-hospital- psychiatry
26. Eddleston J., Ingleby S., Young E. (2005).et al. Returning home after intensive care: a comparison of symptoms of anxiety and depression in ICU and elective cardiac surgery patients and their relatives. Journal of intensive care medicine. 31:86-91. Retrieved from http://doi:10.1016/S0734-3299(08)70176-X
27. Elklit A. Bjerre L. Dokkedahl S. (2017). Risk factors for posttraumatic stress disorder: the role of previous traumas. Journal of child and adolescent behaviour. 5(4):349-358. Retrieved from http://doi:10.4172/2375-4494.1000349
28. Elklit A. Knudsen L, Ratzer M. et al.,(2014). Posttraumatic Stress In Intensive Care Unit Survivors- A Prospective Study. Journal Of Health Psychology And Behavioural Medicine 2(1):882-898. Retrieved from http://dx.doi.org/10.1080/21642850.2014. 943760
29. Ericcson N.S., Joiner T., Cougle J.,et al.,(2015). Combat exposure in early adulthood interacts with recent stressors to predict PTSD in aging male veterans. The Gerontological Society of America. 56(1):82-91. Retrieved from https://doi:10.1093/geront/gnv036
30. Fumis R. Ranzani O. Martins P et al., (2014). Symptoms of anxiety, depression and post traumatic stress in pairs of patients and their family members during

and following ICU stay: who suffers most? Journal of critical care. 18(1):P25 Retrieved from https://doi:10.1186/cc13215

31. Griffith R. Jones C. Humphris G. (2001). Memory, delusions, and the development of acute posttraumatic stress disorder related symptoms after intensive care. Journal of critical care medicine. 29(3):573-580. Retrieved from https://www.ncbi.nlm.nih. gov/m/ pubmed/ 11373423/
32. Griffiths J. Hatch R. McKechnie S. (2011). Psychological intervention to prevent ICU related PTSD: who, when and for how long? Journal of critical care. 15:141-143. Retrieved from http://ccforum.com/content/15/2/141
33. Girard T.D, Jackson J.C., Shintani A.K., Godson S. (2007). Risk factors for Posttraumatic Stress Disorder Symptoms following Critical Illness requiring Mechanical Ventilation: A Prospective Cohort Study. Journal of Critical Care. 11(1) R28. Retrieved from http://ccforum.com/content/11/1/R28
34. Jacka M.J. Parada P. Mitchell N. (2016). Incidence and prevalence of anxiety, depression, and Post Traumatic Stress Disorder among critical care patients, families and practitioners. Journal of anesthesia and intensive care medicine. 1(1):001-004. Retrieved from http://doi:10.19080/JAICM.2016.01.555555
35. Jackson J.C. Brenda T. Pun, Hughes C.J et al., (2014). Depression, posttraumatic stress disorder and functional disability in survivors of critical illness in the ICU study: a longitudinal cohort study. The journal of Lancet Respiratory Medicine. 2(5):369-379. Retrieved from https://doi.org/10.1016/S2213-2600(14)70051-7
36. Jackson J.C., Pandharipande P., Girard T. et al., (2014) Depression, PTSD and Functional Disability in survivors of critical illness: results from the BRAIN ICU: longitudinal cohort study. Lancet respir med. 2(5):369-379. Retrieved from http://doi:10.1016/S2213-2600(14)70051-7
37. Jones C. Backman C. Capuzzo M. et al., (2010). Intensive care diaries reduce new onset Post Traumatic Stress Disorder following critical illness: a randomised controlled trial. Journal of critical care. 14(5):R168. Retrieved from https://doi.org/10.1186/cc9260
38. Jubran A., Lawm G., Duffner L. et al.,(2010). Post-Traumatic Stress Disorder after Weaning From Prolonged Mechanical Ventilation. Journal of Intensive Care Medicine. 36(12):2030-2037. Retrieved from https://doi:10.1007/s00134-010-1972-8

39. Lancaster C. Teeters J. Gros D. (2016). Posttraumatic Stress Disorder: Overview of evidence based assessment and treatment. Journal of Clinical Medicine. 5(105). Retrieved from https://doi:10.3390/jcm5110105
40. Long A.C. Davydow D.S., Cross E.K. Kurtis R.J. (2014). Posttraumatic Stress Disorder among survivors of critical illness: Creation of a conceptual model addressing identification, prevention and management. Journal of Intensive Care Medicine 40(6):820-829. Retrieved from http://doi:10.1007/s00134-014-3306-8
41. Marshall G.N. Miles J.N. Stewart S.H (2010). Anxiety sensitivity and PTSD symptoms severity are reciprocally related: evidence from a longitudinal study of physical trauma. Journal of abnormal psychology. 119(1):143-150. Retrieved from https://doi:10.1037/a0018009
42. Morrissey M. Collier E. (2016). Literature review of posttraumatic stress disorder in the critical care population. Journal of clinical nursing.25(11-18).k Retrieved from https://doi.org/10.1111/jocn.13138
43. Myhren H, Toien K, Ekleberg O ET AL., (2009). Patients memory and psychological distress after ICU stay compared with the expectations of the relatives. Journal of intensive care medicine. 35(12): 2078-2086. Retrieved from https://doi:10.1007/s00134-009-1614-1
44. Myhren H. Toien K. Stokland O. et al., (2010). Posttraumatic Stress, Anxiety and Depression symptoms in patients during the first year post Intensive Care Unit discharge. Journal of Critical Care.14:R14. Retrieved from http://ccforum.com/content/14/1/R14
45. Peris A. Belloni L. Bonizzoli M.(2011). Early intra intensive care unit psychological intervention promotes recovery from posttraumatic stress disorders, anxiety, and depression symptoms in critically ill patients. Journal of critical care. 15(2):418-226. Retrieved from http://ccforum.com/content/15/1/R41
46. Porhomayon J. Nader D. Jaoude P. (2015). Impact of sedation on cognitive function in mechanically ventilated patients. International journal on lung, airway and breathing. 194(1):43-52. Retrieved from https://doi.org/10.1007/s00408-015-9820-9
47. PTSD: National center for PTSD (2017). The DSM-5 definition of PTSD. https://www.ptsd.va.gov/profrssional/PTSD-overview/dsm5_criteria_ptsd.asp

48. Rattray J.E. Johnson M, Wildsmith J.A.W. (2005). Predictors of emotional outcomes of intensive care. Journal of anaesthesia. 60:1085-1092. Retrieved from http://doi:10.1111/j.1365-2044.2005.04336.x
49. Rattray J.E Hull A. Ullman A.J. Aitken et al., (2013). The Use of Diaries in Psychological Recovery from Intensive Care. Journal of Critical Care.17:253-262.
Retrieved from http://ccforum.com/content/17/6/253
50. Rattray J.E. Hull A.M. Janice E. (2008). Emotional outcome after intensive care. Journal of advanced nursing. 64(1):2-13. Retrieved from http://doi:1111/j.1365-2648.2008.04767.x
51. Sadat Z. Abdi M. Aghajani M. (2015).Prevalence of Posttraumatic Stress Disorder and related factors among patients discharged from Critical Care Units in Kashan, Iran. Archives of Trauma Research 4(4):1-6. Retrieved from https://doi:10.5812/atr.28466
52. Sareen J., (2014). Post-traumatic stress disorder in adults: impact, comorbidity, risk factors and treatment. Canadian Journal on Psychiatry. 59(9):460-467. Retrieved from www.ncbi.nlm.nih.gov/pmc
53. Stein. D.J. Koenen K.C. Friedman M.J. et al., (2013). Dissociation in PTSD: Evidence from the world mental health surveys. 7394):302-312. Retrieved from https://dx.doi:10.1016/j.biopsych.201.08.022
54. Svenningsen H. Christensen D., Tonneson E. K, et al., (2015). Symptoms of posttraumatic stress after intensive care delirium. Biomed research international. Retrieved from http://dx.doi.org/10.1155/2015/876947
55. Tori. Deangelis (2008). PTSD treatments grow in evidence, effectiveness. Monitor on Psychology. 39(1). Retrieved from http://www.apa.org/monitor/jan08/ptsd.aspx
56. Twigg E. Humphris G. Jones C. Griffith RD (2008). Use of a screening questionnaire for post-traumatic stress disorder (PTSD) on a sample of UK ICU patients. Acta anaesthesiol scand. 52(2):202-208
57. Wade D. Hardy R., Howell D.,. (2013). Identifying clinical and acute psychological risk factors for PTSD after critical care: a systematic review. Minerva anestesiologica. 79(8):944-963. Retrieved from https://www.uclh.nhs.uk>PTSDpubrev

58. Wallen K. Creedy D. K. Thalib L. Chaboyer W. (2008) Symptoms of acute posttraumatic stress disorder after intensive care. American Journal Of CriticalCare.17(6):534-543.Retrieved from http://ajcc.aacnjournals.org/
59. Warlan H. Connelly C. (2016). Detection of posttraumatic stress symptoms in patients after discharge from intensive care. American Journal of Critical Care. 25(6)509-516. Retrieved from http://dx.doi.org/10.4037/ajcc2016573
60. Zakerimoghadam M., Ghyasvandian S., Asayesh H., et al., (2016). Prevalence of Anxiety in the Process of Transferring Patients from Cardiac Surgery Intensive Care Unit to the General Ward. Journal of critical care nurse. 9(3):e8001. Retrieved from https://www.doi:10.17795/ccn-8001

NET REFERENCES

61. https://onlinelibrary.wiley.com
62. https://en.m.wikiversity.org
63. https://www.researchgate.net
64. https://etd.ohiolink.edu
65. www.springerpub.com
66. https://www.ncbi.nlm.nih.gov
67. https://flowpsychology.com
68. https://www.apa.org

APPENDIX-A

SECTION A

DEMOGRAPHIC VARIABLE

1. Age:
   a) 17-35 years
   b) 36-50years
   c) 51-70 years

2. Sex:
   a) Male
   b) Female

3. Education:
   a) Illiterate
   b) Primary education
   c) High school
   d) Graduate

4. Marital status:
   a) Single
   b) Married
   c) widowed

5. Occupation
   a) Unemployed
   b) Self employment
   c) Professional
   d) Retired

6. Social habits
   a) smoker
   b) alcoholic
   c) smoker and alcoholic
   d) nil

SECTION- B

CLINICAL CHARACTERISTICS

1. Sedative dosage:
   a) No sedation
   b) Light
   c) Moderate
   d) Severe

2. Number of vasopressors:
   a) 1
   b) 2
   c) >2
3. CAM-ICU
   a) Positive
   b) Negative

4. Days restrained
   a) 1-3
   b) 4-6
   c) More than 6 days

5. Days sedated
   a) 1-3
   b) 4-6
   c) More than 6 days

6. Days received vasopressors
   a) 1-3
   b) 4-6
   c) More than 6 days

7. Days in ICU
   a) 1-3
   b) 4-6
   c) More than 6 days

8. APACHE SCORE:
   a) 10-14
   b) 15-19
   c) 20-24
   d) 25-29
   e) 30-34
   f) >34

APACHE II ASSESSMENT SCALE

Temperature:

Mean Arterial Pressure:

Heart Rate:

Respiratory Rate:

FiO2:

Serum Sodium:

Serum Potassium:

Serum Creatinine:

Hematocrit:

WBC Count:

Glasgow Coma Scale Score:

Serum HCO3:

Age:

Chronic Health Condition

Acute Renal Failure:

Chronic Health Condition/ Severe Organ Dysfunction Yes /No

Total Score=A+B+C

A= Total Acute Physiology Score (Sum Of the 12 Individual Variable Points)

B= Age Points

C= Chronic Health Points

RICHMOND AGITATION SEDATION SCALE

Score	Term	Description
+4	Combative	Overly combative, violent, immediate danger to staff
+3	Very agitated	Pulls or removes tubes or catheters, aggressive
+2	Agitated	Frequent unpurposeful movement
+1	Restless	Anxious
0	Alert and calm	Not fully alert but has sustained awakening
-1	Drowsy	Briefly awakens to voice with eye contact
-2	Light sedation	Movement or eye opening but no eye contact
-3	Moderate sedation	Eye opening to voice
-4	Deep sedation	No response to voice but response to physical stimulation
-5	Unarousable	No response to voice ad physical stimulation

CONFUSION ASSESSMENT METHOD (CAM) ICU

SL.NO.	FEATURES
A.	Acute onset or fluctuating course
B.	Inattention
C.	Altered level of consciousness
D.	Disorganized thinking

The diagnosis of delirium is confirmed by presence of both features A and B and the presence of either feature C or D

APPENDIX-B

SECTION- C

POST TRAUMATIC SRESS SCALE- 14 QUESTIONNAIRE

Read each statement and then circle the appropriate number given below to indicate how you feel at this moment. Do not spend too much time on one question.

A. When I think back to the time of my serious illness and my stay in the hospital, I remember:

Nightmares yes /no
strong anxiety /panic states yes/ no
severe pain yes /no
Difficulty breathing / feelings of suffocation yes /no

B. Currently (ie in the last days), I suffer from:

1. Sleep disorders.

never always
1 2 3 4 5 6 7

2. ... nightmares

Never always
1 2 3 4 5 6 7

3. ... depression / I felt depressed / depressed.

never always
1 2 3 4 5 6 7

4. ... dreadfulness / I am easily frightened by sudden sounds or movements.

Never always
1 2 3 4 5 6 7

5. ... the need to withdraw from others.

never always
1 2 3 4 5 6 7

6. ... irritability, which means that I am easily upset, annoyed or angry.

Never always
1 2 3 4 5 6 7

7. ... frequent mood swings.

Never always
1 2 3 4 5 6 7

8. ... a guilty conscience, I blame myself, I have guilt feelings.

never always
1 2 3 4 5 6 7

9. ... fear of places and situations that reminds me of ICU

Never always
1 2 3 4 5 6 7

10. ... muscle tension.

Never always

1 2 3 4 5 6 7

11. ... shattering, unwanted thoughts or images of my time on ICU

Never always

1 2 3 4 5 6 7

12. ... feeling numb (eg the inability to cry or to develop affection).

never always

1 2 3 4 5 6 7

13. ... avoiding people, places or situations that remind me of the ICU

Never always

1 2 3 4 5 6 7

14. ... the feeling as if my plans or dreams for the future will not come true.

Never always

1 2 3 4 5 6 7

APPENDIX-C

SECTION- D

STATE TRAIT AND ANXIETY INVENTORY

Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now:

1- Not At All
2- Somewhat
3- Moderately So
4- Very Much So

STAI FORM Y-1

Sl. No.	Statement	1	2	3	4
		Not at all	somewhat	Moderately so	Very much so
1.	I feel calm				
2.	I feel secure				
3.	I am tense				
4.	I feel strained				
5.	I feel at ease				
6.	I feel upset				
7.	I am presently worrying over possible misfortunes				
8.	I feel satisfied				
9.	I feel frightened				
10.	I feel comfortable				
11.	I feel self-confident				
12.	I feel nervous				
13	I am jittery				
14.	I feel indecisive				
15.	I am relaxed				
16.	I feel content				
17.	I am worried				
18.	I feel confused				
19.	I feel steady				
20.	I feel pleasant				

STAI FORM Y-2

Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel generally:

1- Almost never; 2 – sometimes; 3 – often; 4 - almost always

Sl. No.	Statement	1	2	3	4
		Almost never	**Sometimes**	**Often**	**Almost always**
1.	I feel pleasant				
2.	I feel nervous and restless				
3.	I feel satisfied with myself				
4.	I wish I could be as happy as others				
5.	I feel like a failure				
6.	I feel rested				
7.	I am calm, cool and collected				
8.	I feel that difficulties are piling up so that I cannot overcome them				
9.	I worry too much over something that doesn't matter				
10.	I am happy				
11.	I have disturbing thoughts				
12.	I lack self confidence				
13	I feel insecure				
14.	I make decisions easily				
15.	I feel inadequate				
16.	I am content				
17.	Some unimportant things run my mind and bothers me				
18.	I take disappointments so keenly that I can't put them out of my mind				
19.	I am a steady person				
20.	I get in a state of tension as I think over my recent concerns and interests.				

APPENDIX-D

LETTER SEEKING EXPERT'S GUIDANCE

KMCH COLLEGE OF NURSING

(Approved by the Government of Tamil Nadu & The Tamil Nadu Nurses & Midwives Council, Chennai.
Recognized by the Indian Nursing Council, New Delhi and Affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai)
KMCH Campus, Avinashi Road, Coimbatore – 641 014. INDIA
Ph: (0422) 4323740, 2369321 Telefax : (0422) 2627525 Website: kmchcon.ac.in E-mail: nursing@kmch.ac.in

Prof. DR. S. Madhavi, M.Sc(N).,Ph.D.,
Principal
Ref : KMCT/6225/03/18

07.03.2018

To
Dr.P. Vivekanandan, MBBS., EDIC., FRCA(UK)., FFICM(UK).,
Consultant Intensivist,
Kovai Medical Center and Hospital,
Coimbatore – 14.

Dear Sir,

Greetings to you from KMCH College of Nursing.

I submit that one of our M.Sc(N) II Year student by name Mrs. Anu Mary Varghese specializing in Medical Surgical Nursing in our college desires to conduct a study titled " A Study to Assess the Post Traumatic Stress Symptoms and Anxiety Among Patients after discharge from Intensive Care Unit at Kovai Medical Center and Hospital, Coimbatore." as a part of her M.Sc(N) curriculum.

As she is in need of Medical Expert to complete the study, I request you to guide the student.

Thanking you.

Yours Truly

PRINCIPAL

The Principal
K.M.C.H. College of Nursing
P.B. No. : 3209, Avanashi Road,
Coimbatore - 641 014.

Vivekanandan P

Dr. P. VIVEKANANTHAN DA., FRCA., EDIC., FFICM.,
Consultant Intensivist
T.N. Reg. No : 54481
Kovai Medical Center & Hospital
Coimbatore - 641 014. Tamilnadu. INDIA

Administrative Office :
Kovai Medical Center Research and Educational Trust
No.940/1A&B, Kovai Estate, Kalapatti Road, Coimbatore - 641 048. INDIA
Ph : (0422) 2369321 E-mail : info@kmch.ac.in

APPENDIX-E

REQUISITION FOR CONTENT VALIDITY

From

II year M.Sc. Nursing,

KMCH College Of Nursing,

Coimbatore.

To

Through the proper channel

The Principal,

KMCH College Of Nursing,

Coimbatore.

Respected Madam,

Sub: Seeking Expert Opinion and Content Validity Regarding

I am the student of KMCH college of Nursing. As a part of partial fulfilment of my post graduate programme, I wish to undertake a study titled **"A study to assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from ICU at KMCH, Coimbatore."** It will be of immense help to me if you could peruse the proposal and the research tool. Here with I am enclosing the copy to the same. Kindly do the needful.

Thanking You,

Date:

Place: Yours faithfully,

301610451

APPENDIX-F

ETHICAL APPROVAL LETTER

KMCH ETHICS COMMITTEE
KOVAI MEDICAL CENTER AND HOSPITAL LIMITED
Excellence in Healthcare
99, Avanashi Road, Coimbatore - 641 014. INDIA
✆ (0422) 4323800, 4323619 | Fax : (0422) 4270805 | E-mail : ethics@kmchhospitals.com
EC Reg. No : ECR / 112 / Inst / TN / 2013

Ref: EC/AP/607/04/2018
23.04.2018

APPROVED

To

Mr. P. Kuzhanthaivel, M.Sc. (N),
Professor – Department of Medical Surgical Nursing,
KMCH College of Nursing,
Coimbatore – 641 014.

Dear Mr. P. Kuzhanthaivel,

The proposal entitled **"A study to assess the post traumatic stress symptoms and anxiety among patients after discharge from Intensive Care Unit at KMCH, Coimbatore"**, submitted by **Mrs. Anu Mary Varghese,** under your supervision was reviewed by the Ethics Committee in its meeting held on **21.04.2018** and grants ethical clearance for the study .

Regards,
Yours Sincerely,

24/4/18

Dr.M.S. Thamizharasi,
Chairperson,
KMCH Ethics Committee.

Dr. M.S.Thamizharasi
M.D.,D.G.O.,PG Dip (Psych)
Chairperson
Ethics Committee
Kovai Medical Center and Hospital
Coimbatore - 641 014

Copy to Clinical Guide:

Dr. P. Vivekanandan, EDIC, FRCA (UK), FFICM (UK),
Consultant - Intensivist,
Kovai Medical Center and Hospital,
Coimbatore – 641 014.

ETHICS COMMITTEE

APPENDIX-G

CERTIFICATE OF CONTENT VALIDITY

CERTIFICATE OF CONTENT VALIDITY

This is to certify that I have perused that Research proposal submitted by Reg No: 301610451 entitled as **"A study to assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from Intensive Care Unit at KMCH, Coimbatore"**

I found that Methodology of the content and tool are appropriate.

Date: 29.03.2018

Signature & seal

Department of Critical Care Medicine
Kovai Medical Center and Hospital
Avanashi Road, Coimbatore - 641 014
Ph : 0422 - 4323200

CERTIFICATE OF CONTENT VALIDITY

This is to certify that I have perused that Research proposal submitted by Reg No: 301610451 entitled as **"A study to assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from Intensive Care Unit at KMCH, Coimbatore"**

I found that Methodology of the content and tool are appropriate.

Date: 2.04.2018

Signature & seal

CERTIFICATE OF CONTENT VALIDITY

This is to certify that I have perused that Research proposal submitted by Reg No: 301610451 entitled as **"A study to assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from Intensive Care Unit at KMCH, Coimbatore"**

I found that Methodology of the content and tool are appropriate.

Date: 30.02.2018

Signature & seal

CERTIFICATE OF CONTENT VALIDITY

This is to certify that I have Perused that Research proposal submitted by Register No. 301610451 entiled "**A Study to assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from ICU at KMCH, Coimbatore".**

I found that the methodology of the content and tool are appropriate.

DATE: 3-04-2018

K. Balamuthamurthy
SIGNATURE AND SEAL

CERTIFICATE OF CONTENT VALIDITY

This is to certify that I have Perused that Research proposal submitted by Register No. 301610451 entiled "**A Study to assess the Post Traumatic Stress Symptoms and Anxiety among patients after discharge from ICU at KMCH, Coimbatore".**

I found that the translation of the tool are appropriate.

DATE: 06.04.2018

SIGNATURE AND SEAL

APPENDIX- H

LIST OF EXPERTS

1. Prof. DR. S. Madhavi, M.Sc. (N), Ph.D.,
   Principal
   Department of Medical and Surgical nursing,
   KMCH College of Nursing,
   Coimbatore – 641014
2. Dr. P. Vivekanandhan
   DA., EDIC., FRCA(UK) FFICM,
   Consultant Intensivist,
   Kovai Medical Center and Hospital,
   Coimbatore-14.
3. Prof. P. Kuzahanthaivel, M.Sc (N).,
   Department of Medical and Surgical nursing,
   KMCH College of Nursing,
   Coimbatore – 641014
4. Prof. DR. P. Viji, M.Sc (N), Ph.D.,
   Department of Medical and Surgical nursing,
   KMCH College of Nursing,
   Coimbatore – 641014
5. Prof. DR. Balasubramani, M.Sc (N), Ph.D.,
   Department of Medical and Surgical nursing,
   KMCH College of Nursing,
   Coimbatore – 641014

பகுதி - இ

அதிர்ச்சிக்குப் பிறகு மன அழுத்த அளவு - 14 வினா நிரல்

ஒவ்வொரு வினாநிரலில் உள்ள அதன் கூற்றையும் அந்த நேரத்தில் நீங்கள் எப்படி உணர்கிறீர்கள் என்பதை குறிப்பிடுவதற்கு கீழே கொடுக்கப்பட்டுள்ள தெரிவுகளுள் பொருத்தமான எண்ணை வடட்மிடவும். எந்தவொரு கேள்விக்கும் அதிக நேரத்தைச் செலவிட வேண்டாம்.

A. நான் தீவிரமான நோயிலிருந்து குணமடைந்தப்பிறகும் தீவிர சிகிச்சைப் பிரிவில் இருக்கும் பொழுது எனக்கு

கனவுகள் தோன்றுகிறது.	ஆம் / இல்லை
அதிக கவலைகள் மற்றும் பீதி ஏறபடுகிறது	ஆம் / இல்லை
கடுமையான வலி ஏற்படுகிறது	ஆம் / இல்லை
மூச்சு விடுவதில் சிரமம் / மூச்சுத் திணறல் ஏற்படுகிறது	ஆம் / இல்லை

B. தற்போது (அதாவது கடைசி நாட்களில்) நான் பின்வருவனவ்றால் பாதிக்கப்படுகிறேன்.

1. தூக்கக் கோளாறுகள்

   ஒருபோதும் இல்லை எப்போதும் உண்டு

   1 2 3 4 5 6 7

2. கனவுகள் தோன்றுகின்றன

   ஒருபோதும் இல்லை எப்போதும் உண்டு

   1 2 3 4 5 6 7

3. மன அழுத்தத்தை உணர்கிறேன்

   ஒருபோதும் இல்லை எப்போதும் உண்டு

   1 2 3 4 5 6 7

4. நான் திடீரென்று ஏற்படுகின்ற சப்தம் அல்லது இயக்கங்களால் பயப்படுகிறேன்.

   ஒருபோதும் இல்லை எப்போதும் உண்டு

   1 2 3 4 5 6 7

5. நான் தனிமையில் இருக்க விரும்புகிறேன்

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

6. நான் எளிதாகக் கோபப் படுகிறேன் அல்லது கவலைப்படுகிறேன்

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

7. அடிக்கடி மனநிலையில் மாற்றம் ஏற்படுகிறது.

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

8. எனக்கு குற்ற உணர்வு ஏற்படுகிறது.

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

9. நான் தீவிர சிகிச்சைப்பிரிவில் இருக்கிறேன் என்பதை நினைக்கும் பொழுது பயம் ஏற்படுகிறது.

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

10. தசைப்பிடிப்பு ஏற்படுகிறது

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

11. மருத்துவமனையில் நான் தீவிர சிகிச்சைப் பிரிவில் இருக்கும்பொழுது தேவையற்ற எண்ணங்களும், காட்சிகளும் தோன்றுகின்றன.

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

12. நான் உணர்வற்ற நிலையில் உள்ளேன். (அழ முடியவில்லை/உணர்வுகளை வெளிப்படுத்த இயலவில்லை)

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

13. நான் தீவிர சிகிச்சைப் பிரிவில் இருப்பதை உணர்கிற பொழுது நபர்களை, இடங்களை அல்லது சூழல்களை தவிர்க்க விரும்புகிறேன்.

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

14. என்னுடைய எதிர்காலத் திட்டங்கள் அல்லது கனவுகள் நிறைவேறும் என்ற நம்பிக்கை எனக்கு இல்லை.

ஒருபோதும் இல்லை எப்போதும் உண்டு

1 2 3 4 5 6 7

தற்போதைய அல்லது பொதுவான கவலை

சுய மதிப்பீடு - 1

பெயர்: தேதி:

வயது:

		ஒரு போதும் இல்லை 1	ஏறக்குறைய 2	மிதமாக 3	அதிகமாக4
1	நான் அமைதியை இருப்பதாக உணருகிறேன்				
2	நான் பாதுகாப்பாக இருப்பதாக உணர்கிறேன்				
3	நான் மன இறுக்கத்தில் உள்ளேன்				
4	நான் சிரமத்தை உணர்கிறேன்				
5	நான் எளிதாக உணர்கிறேன்				
6	நான் சோகமாக உணர்கிறேன்				
7	நான் தற்போது எனக்கு ஏற்படும் துரதிர்ஷ்டங்களைப் பற்றி கவலைப்படுகிறேன்				
8	நான் திருப்தி அடைகிறேன்				
9	எனக்கு பயமாக இருக்கிறது				
10	நான் வசதியாக உள்ளேன்				
11	நான் என்னிடம் தன்னம்பிக்கை உண்டு				
12	நான் பதட்டமாக உணர்கிறேன்				
13	நான் நிலை குலைந்து இருப்பதாக உணர்கிறேன்				
14	என்னால் சரியான முடிவை எடுக்க இயலவில்லை.				
15	நான் நிம்மதியாக இருக்கிறேன்				
16	நான் நிறைவாக உணர்கிறேன்				
17	நான் கவலைப் படுகிறேன்				
18	நான் குழப்பமாக இருக்கிறேன்				
19	நான் நிலையாக இருக்கிறேன்				
20	நான் மகிழ்ச்சியுடன் இருக்கிறேன்.				

		பெரும்பாலும் இல்லை 1	சில நேரங்களில் 2	அடிக்கடி 3	எப்பொழுதும் 4
21	நான் மகிழ்ச்சியாக உணர்கிறேன்				
22	நான் பதற்றமாகவும் அமைதியின்மையையும் உணர்கிறேன்				
23	நானே தன்னிறைவு அடைகிறேன்				
24	நான் மற்றவர்களை போல் நான் மகிழ்ச்சியாக இருக்க விரும்புகிறேன்.				
25	நான் தோல்வியைு உணர்கிறேன்.				
26	நான் ஓய்வெடுப்பதாக உணர்கிறேன்				
27	நான் அமைதியாக இருக்கிறேன் என்று உணர்கிறேன்				
28	என்னைச் சூழந்திருக்கும் நெருக்கடியிலிருந்து என்னால் விடுபட முடியாததை உணர்கிறேன்.				
29	நான் அற்ப விஷயத்திற்கும் மிக அதிகமாக கவலைப்படுகிறேன்.				
30	நான் சந்தோஷமாக இருக்கிறேன்				
31	எனக்கு தொந்தரவு செய்யும் எண்ணங்கள் தோன்றுகின்றன				
32	எனக்கு தன்னம்பிக்கை குறைவாக உள்ளது.				
33	நான் பாதுகாப்பு இன்மையை உணர்கிறேன்				
34	நான் எளிதாக முடிவுகளை எடுக்கிறேன்.				
35	நான் குறை மனதோடு இருக்கிறேன்				
36	நான் மனநிறைவோடு இருக்கிறேன்.				
37	சில தேவையற்ற எண்ணங்கள் எனக்குள் தோன்றி என்னை பாதிக்கின்றன.				
38	என் மனதிலிருந்து நீக்க முடியாத ஏமாற்றங்கள் என்னிடம் உள்ளன.				
39	நான் ஒரு நிலையான மனிதன்				
40	எனது சமீபத்திய கவலைகள் மற்றும் ஈடுபாடுகள் மீது மன அழுத்தத்தில் உள்ளேன்.				